DOCUMENT RESUME

ED 427 889 PS 027 396

AUTHOR	Tao, Fumiyo; Gamse, Beth; Tarr, Hope
TITLE	National Evaluation of the Even Start Family Literacy Program: 1994-1997 Final Report.
INSTITUTION	Fu Associates, Ltd.; Abt Associates, Inc., Bethesda, MD.
SPONS AGENCY	Department of Education, Washington, DC. Planning and Evaluation Service.
PUB DATE	1998-00-00
NOTE	275p.; For 1996 Interim Report, see ED 418 815. For the "Evidence from the Past and a Look to the Future" report, see PS 027 397.
CONTRACT	EA94068001
AVAILABLE FROM	U.S. Department of Education, Planning and Evaluation Service, Room 6W314, FOB6, Washington, DC 20202-8240; Tel: 877-433-7827 (Toll Free); e-mail: esed@ed.gov; Web site: www.ed.gov
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC11 Plus Postage.
DESCRIPTORS	Adult Education; Early Childhood Education; *Family Literacy; *Literacy Education; Outcomes of Education; Parent Education; Participant Characteristics; Program Effectiveness; Program Evaluation; State Programs
IDENTIFIERS	*Even Start; Program Characteristics

ABSTRACT

The Even Start Literacy Program addresses the basic educational needs of parents and children of low-income families by providing a unified program of: (1) adult basic or secondary education and literacy programs for parents; (2) assistance for parents to effectively promote their children's educational development; and (3) early childhood education for the children. This final report of the second national evaluation incorporates findings from interim analyses of data collected annually during the last 4 years as well as key findings from the first national evaluation to assess what aspects have changed and what have remained stable during the program's 8 years. Following an executive summary, the report's introduction examines program growth during the past 8 years and principles of the Even Start approach. The remaining chapters cover: (2) design and scope of the second national evaluation; (3) the needs of Even Start families; (4) what resources support the Even Start services; (5) what services Even Start projects provide to participants; (6) the extent to which Even Start families participate in the services provided; (7) educational and developmental outcomes; (8) findings from the two evaluations; and (9) conclusions. Findings include the following: (1) children achieved significant gains in cognitive development; (2) approximately 10 percent of adults attained a GED certificate while participating in Even Start in a given year; (3) service intensity, measured in hours of instructional services offered to participants, has increased steadily during the 4 years of the second evaluation; and (4) excluding families who left the program after having completed their goals, 60 percent of families in 1996-97 were continuing participation at the end of the program year (64 percent of new families; 54 percent of families continuing from previous years). The report's appendices include Even Start legislation, additional data tables, multivariate analyses

+++++ ED427889 Has Multi-page SFR---Level=1 +++++

in chapters 5 and 6, and additional information about the sample study. Contains 133 references.) (HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

PS

ED 427 889

National Evaluation of

The Even Start Family Literacy Program

1998

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
● Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

1994-1997 Final Report

U.S. Department of Education
Planning and Evaluation Service

PS 027996

BEST COPY AVAILABLE

This report was prepared under the U.S. Department of Education, Contract Number EA94068001. The views expressed in this report do not necessarily reflect the position or policy of the Department, and no official endorsement by the Department should be inferred.

National Evaluation of
The Even Start Family Literacy Program

1994-1997 Final Report *1998*

Prepared by:

Fumiyo Tao
Fu Associates, Ltd.

Beth Gamse
Abt Associates Inc.

Hope Tarr
Consultant

Prepared for:
U.S. Department of Education
Planning and Evaluation Service

Permission to reprint this publication is not necessary, but the citation should be: *National Evaluation of The Even Start Family Literacy Program, 1994-1997 Final Report.* 1998. Washington, DC: U.S. Department of Education, Planning and Evaluation Service. The Report highlights are also available at the Department's home page at http://www.ed.gov. Individuals with disabilities may obtain this document in an alternate format (e.g., Braille, large print, audiotape, or computer diskette) on request. For more information, please contact us at:

U.S. Department of Education
Planning and Evaluation Service
Room 6W314, FOB6
Washington, D.C. 20202-8240
http://www.ed.gov
E-Mail: esed@ed.gov
Telephone: 1-877-433-7827

Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

ACKNOWLEDGMENTS

This report is the final product of the second national Even Start evaluation, representing a tremendous amount of work performed by countless individuals throughout the four years of the evaluation. By far, the most important contributors were Even Start project directors, staff, and, in many cases, local evaluators. Each year, they collected intake information on new families, maintained participation records on all participants, and entered these data into the data entry system. In addition, many state coordinators provided encouragement and assistance to their projects and the evaluation contractors in support of this effort. All of their efforts are deeply appreciated.

A special recognition is extended to the projects that participated in the Sample Study. In addition to the data that all projects collected, these projects administered assessment scales to families participating in the Sample Study and maintained detailed participation records. These data were needed to address the questions concerning program effectiveness.

Throughout this complex four-year evaluation, the U.S. Department of Education staff provided valuable guidance and support to the evaluation contractors. Special thanks are due to: the Contracting Officer's Technical Representatives, including Robert Glenn, Tracy Rimdzius, and Barbara Vespucci of the Planning and Evaluation Service (PES); Valena Plisko, also of PES; and Donna Campbell, Laura Chow, Regina Kinnard, Patricia McKee, DonnaMarie Marlow, and Wei-min Wang of the Office of Elementary and Secondary Education.

The Expert Work Group, which represents the academic, research, and practitioner communities related to Even Start, contributed critical insights and feedback on the conceptual and methodological approaches of the second evaluation, as well as data analysis, interpretation, presentation, and future evaluation plans. The group members were: Sharon Darling, National Center for Family Literacy; Barbara Shay, New York State Education Department; Catherine Snow, Harvard University; Maris Vinovskis, University of Michigan; Mary Wagner, SRI International; Heather Weiss, Harvard Family Research Project; and Miriam Westheimer, HIPPY USA.

Two firms conducted this evaluation: Fu Associates, Ltd., the prime contractor, and Abt Associates Inc., the subcontractor. The major contributors to the Fu Associates team, headed by Fumiyo Tao, were: Christine Arriola, Rhonda Byrnes, Sherry Khan, Takeko Kumagawa, Tommy Lo, Kathy McDonough, Amy Nelson, Brian Shea, Bonnie Silsby, Denise Stakem, Amy Stock, Hope Tarr, and Marlene Walker. Key staff of the Abt Associates team, headed by Beth Gamse, were: Anne Chase, Dylan Conger, Cindy Creps, Lynne Geitz, Don Laliberty, Marjorie Levin, Marc Moss, Marla Nierenberg, Robert St.Pierre, and Janet Swartz. We also thank Judith D. Singer, whose writing and advice about multi-level modeling in general and PROC MIXED, specifically, were invaluable.

EXECUTIVE SUMMARY

The Even Start Family Literacy Program addresses the basic educational needs of parents and children of low-income families by providing a unified program of (1) adult basic or secondary education and literacy programs for parents; (2) assistance for parents to effectively promote their children's educational development; and (3) early childhood education for the children. All Even Start projects are required to provide services in each of three "core" areas corresponding to the broad programmatic goals of Even Start: adult education and literacy; parenting education; and early childhood education. Projects provide direct support for services and also build on existing community resources by collaborating with other service providers.

The Even Start program was initially authorized by 1988 amendments to the Elementary and Secondary Education Act of 1965 (ESEA), then amended by the National Literacy Act of 1991 (P.L. 102-73). In 1994, the Even Start program was reauthorized by the Improving America's Schools Act (P.L. 103-382) as Part B of Title I of the ESEA.

Even Start was first implemented as a federally-administered program in fiscal year 1989. Since 1992, the program has been primarily state administered. The states award subgrants to partnerships, each consisting of at least one local education agency (LEA) and at least one community-based organization, institution of higher education, or other public or private non-profit agency. A few types of projects remain under federal administration, including: special set-aside programs for migrant agricultural families, Indian tribes and tribal organizations, and insular areas; discretionary grants for statewide family literacy initiatives; and a family literacy project in a prison that houses women and their preschool-aged children. Since 1989, the program has grown from seventy-six projects serving approximately 2,500 families to 637 projects serving approximately 34,400 families eight years later in 1996-97.

THE NATIONAL EVALUATION

Two types of evaluation are required of all Even Start projects by law: an independent local evaluation arranged for by each project and a national evaluation conducted by the U.S. Department of Education. The first national evaluation documented the program's early development from 1989-90 through 1992-93. Continuing the same objectives from the first national evaluation, the second national evaluation, covering the program years from 1993-94 through 1996-97, addressed these questions:

1) Who is served by the program and what services do they receive? Is the program reaching the appropriate target population?

2) How is the federal funding spent on the program? How are Even Start services implemented?

3) How well does the Even Start basic model work? What educational and developmental gains are achieved by program participants?

4) What are the characteristics of effective practices and programs?

Since the inception of the Even Start program, data on program participants, implementation, and progress indicators have been collected annually. In the second national evaluation, approximately 95 percent of all local projects provided data on their participants and program implementation each year. In addition, a sample of fifty-seven projects also provided data on program outcomes.[1]

Building upon key findings from the 1994-97 evaluation as a basis, this report reviews what has changed and what has remained stable over the first eight years of the Even Start program. Rather than serve as a final, summative account of program accomplishment, the report is intended to serve as a springboard for continuing program improvement and evaluation efforts that are currently underway.

EDUCATIONAL AND DEVELOPMENTAL OUTCOMES OF EVEN START

The second national evaluation assessed programmatic and participant progress through two chief strategies: one was to collect information on all projects about all participants, and this was called the Universe Study. The second strategy, called the Sample Study, was to collect more detailed educational and developmental outcome data on a subset of participants from approximately 10 percent of the Universe Study. The Sample Study collected outcome data using measures designed to relate participation in Even Start services to specific, measurable educational and developmental outcomes for both adults and children. As in the first national evaluation, the Sample Study measured three types of educational/developmental outcomes: child cognitive development, adult education, and parenting. The second evaluation did not include a control group, and program outcomes were assessed in terms of the differences between participants' pretest (i.e., pre-Even Start) and posttest scores on a battery of standardized tests.

The outcomes presented in this report are based primarily upon data from those participants who remained in Even Start long enough to participate in at least two rounds, or waves, of data collection. For most participants, this translated into an assessment at entry into Even Start, and one additional assessment during the same program year, and for a few participants, another round of assessment in the subsequent year. However, when we contrasted demographic and other characteristics of families for those with only pretest data (or those with one wave) versus those with two waves, we observed systematic differences between the two groups. Essentially, families with more complete data are more likely, on average, to be employed, have higher incomes, speak languages other than English at home, and have completed more schooling. This means that the results we describe from the Sample Study—based upon participants who remain in the program—represent a biased subgroup of the Even Start population. This critical caveat should be kept in mind when reviewing the discussions about educational and developmental outcomes that follow.

---

[1] Exhibit 2.1 in Chapter 2 summarizes the components of the second evaluation and data collected in each component.

- *In the domain of child cognitive development, children in both the first and current evaluations achieved significant gains on the PreSchool Inventory (PSI), a test for school readiness skills.*[2]
- *Children also showed progress on the Preschool Language Scale (PLS-3), a measure that assesses language development.*

We examined children's growth on these two measures by using individual growth modeling to investigate two related questions.

1) "Does children's performance on these measures improve over time?"

2) "Is there variation in the rates at which individuals progress?"

These analyses allowed us to capitalize on the truly longitudinal data collected on the same children over time. For both the PSI and the PLS-3, children with two or more waves of data made clear progress on the outcome measures—more progress than one might expect on the basis of development alone.

- *Children progress at the same rate regardless of family need, although children from families with greater needs consistently score lower, on average, than children from families with fewer needs.*
- *The longer children participate in Even Start, the greater the gain, or the steeper the growth rate on average.*
- *For children with only one wave, the older a child is upon entry to Even Start, the lower the PLS score, on average.*

The fact that we have observed this pattern in the PLS, a measure designed to have the **same** standardized average score of 100 **no matter what the child's age**, provides positive evidence of the benefits of participation in Even Start. Because standardized scores on the PLS do not increase as children develop (e.g., the scores are standardized to remain the same at different age intervals), the growth we observed suggests that participation in Even Start has a demonstrable and positive effect on children.

---

[2] Key evaluation findings are highlighted by bullets in the Executive Summary.

The educational progress for Even Start adults, however, has consistently been more modest than was the case for children. Adults were assessed with either the Comprehensive Adult Student Assessment System (CASAS) or the Tests of Adult Basic Education (TABE) in both reading and math subject areas. Over the course of the Sample Study, adults made gains on these measures.[3]

- *The gains observed on the CASAS are comparable to those in the first national evaluation of Even Start and in other adult education programs, ranging from between one-quarter to about one-half of a standard deviation between pretest and posttest. On average, these are modest gains, representing additional items correct but not movement between one level and the next test level.*

The TABE was not used in the first four-year evaluation of Even Start, so we cannot compare results on this measure to results from the earlier national evaluation.

- *On the TABE, adults made gains of approximately one to one-and-a-half grade levels in reading; adults who entered Even Start with lower literacy skills (those adults with less than a 7th-grade reading proficiency, for example) gained less, on average, than those who entered with reading skills at or above the 10th-grade level.*

The differences between adults of varying educational backgrounds were more pronounced on the math tests; adults who pretested below a 7th-grade level gained less than one grade level by posttest, while those who entered with skills at or above the 10th-grade level gained over two grade levels.

Participating adults' educational progress was also examined in terms of GED attainment.

- *Approximately 10 percent of adults attained a GED certificate while participating in Even Start in a given year.*

The rate of GED attainment for adults who entered in 1994-95, for example, who also participated in 1995-96, increased to approximately 11 percent, and it increased to 14 percent for those who continued to participate in 1996-97. However, only about 40 percent of adults continued to participate into the second program year, and only 14 percent continued into 1996-97. This pattern of slowly increasing percentages of GED attainment appears to persist for adults who entered in the 1995-96 program year, although we only have data on GED attainment for one additional program year.

---

[3] The gain scores discussed here for the CASAS and the TABE include scores for adults who were pretested either in 1994-95 or 1995-96 and posttested either in 1994-95, 1995-96, or 1996-97.

In addition to educational assessments for children and adults, the outcomes included a measure of the home environment, called the Home Observation for Measurement of the Environment (HOME) Screening Questionnaire. The HOME measures the quality of cognitive stimulation and emotional support provided to the child(ren) by the family.

- *Parent posttest scores on the HOME Screening Questionnaire (HSQ) showed moderate gains for parents of children in two age groups: those with children from birth to 3 years of age and those with children between 3 and 6 years of age.*

While the second Even Start evaluation did not include a control group, a control group of low-income families participating in a national evaluation of another federally-funded "two-generation, family support" program showed no change in HSQ scores over time. This finding suggests that there is no "normal" or "developmental" growth associated with this measure. This further suggests that the positive changes observed among Even Start families on this measure may be due to the program rather than to other factors.

The findings about progress on outcome measures are modestly positive, yet we must emphasize that the Sample Study component of the second evaluation, unlike the In-Depth Study (IDS) component of the first evaluation, depended upon local projects administering child and adult tests and collecting and submitting data on outcome measures. Sample Study project staff were initially trained in August and September of 1994. Although there were no other meetings for the Sample Study projects, the projects received refresher training manuals in September 1995 and September 1996. While many projects worked hard to ensure that annual data submissions were accurately completed, both the quality and quantity of data submitted by the local projects were extremely variable. We believe this was due to a combination of factors, including changes in testing and administrative personnel at the project level. As a result, we believe we must interpret our findings with considerable caution because the data may not reflect participants' performance as accurately as we had hoped.

Also, the Sample Study, like the In-Depth Study component of the first national evaluation, was intended to collect three waves of data: the first at pretest, the second at posttest (at the end of a participant's first full program year), and the third wave at the conclusion of the following program year, in order to assess the impact of participation in Even Start over a longer time period. What we learned, however, is that most participants in the Sample Study remained in Even Start long enough to participate in one wave, and in some cases, two waves of data collection, but only about 10 percent of the Sample Study participants were still enrolled in Even Start at the time of wave three. Consequently, we can assess changes in performance from wave one to wave two for many of the Sample Study participants, but our estimates of changes from wave one to wave three are based upon a potentially biased and limited subsample of participants (e.g., those 10 percent or so of participants still enrolled in the program at the end of their second full program year).

FACTORS ASSOCIATED WITH PROGRAM OUTCOMES

Over the past three years, we have collected data on a number of outcome measures for children and adults participating in Even Start and have found the same trend from year to year.

- *On average, participants make gains over time, and the observed gains for children are larger than those observed for adults. This is consistent with what has been found in other studies.*
- *However, the relationships between the amount of instruction received, participant and project characteristics, and outcome measures indicate few clear trends or directions.*
- *Until we begin to observe some consistent patterns in factors associated with participants' gains, we cannot predict program outcomes on the basis of other factors.*

In the first national evaluation, for example, we observed a relationship between service intensity and educational outcomes for children and adults (e.g., the greater the level of participation in Even Start services, the greater the increase in children's gains on the Peabody Picture Vocabulary Test). During the first year of the second national evaluation, we observed some relationships between service intensity, such as hours of adult education or parenting education, and outcomes such as adult scores on the CASAS, TABE (math only), or the HSQ. For the past two program years, however, the data do not indicate any consistent relationship between service intensity and educational outcomes.

Additionally, the variability in data quality increased over time for the Sample Study, and our confidence in the data diminished as a result. Because the relationships are inconclusive and in fact differ somewhat across years, we can only report that despite the gains participants clearly made on all the outcome measures, the explanations for those gains have not been consistent across the several years of the second national evaluation.

EVEN START PARTICIPANTS

To understand the extent of program outcomes achieved by Even Start, the evaluation documents in detail the characteristics of participating families, the extent of their educational needs, the services that are offered by Even Start projects, and the extent of their participation in these services.

Even Start is designed to serve low-income families with parents who have limited educational experiences and/or literacy skills. To participate in Even Start, a family must have (a) a parent who was eligible for adult education services under the Adult Education Act, and (b) a child younger than 8 years of age. Beginning in 1995-96, teen parents who were within the state's compulsory school attendance age range, and who were not eligible for adult education services because of their age or school attendance, became eligible for Even Start.

Consistent with the purpose of the program, Even Start projects are serving families who are disadvantaged economically and educationally.

- *In 1996-97, a large majority of families enrolling in Even Start had incomes substantially below the federal poverty levels (e.g., $15,911 for a family of four with two children in 1996).*
- *A majority of parents were without high school diplomas or General Education Development (GED) certificates at the time of enrollment in Even Start.*
- *More than one-quarter of parents who enrolled in 1996-97 had limited or no English language proficiency.*
- *The extent of poverty has remained consistent throughout the program history, while the need for basic and literacy skills education for parents has increased since the first evaluation.*

FAMILY CHARACTERISTICS

In the 1996-97 program year, approximately 34,400 families, comprising 35,800 parents and 48,200 children, participated in Even Start across 637 projects, based upon data submitted by 95 percent of all projects. The average age of adult participants in 1996-97 was 28 years, one year younger than the average two years earlier. This reflects a steady increase in the enrollment of teen parents from 9 percent in 1994-95 to 17 percent among the 1996-97 new enrollees. The average age of Even Start children in 1996-97 was 4.2 years. Mirroring the increase in the number of teen parents, the number of infants and toddlers served by Even Start also has increased, from 29 percent of all children participating in 1994-95 to 38 percent of new children enrolling in 1996-97.

The family structure of Even Start families has remained fairly consistent over the years—roughly one-half being two-parent families, nearly 40 percent headed by single parents, and the remainder being extended families. As in previous years, the average size of Even Start families was between five and six persons in 1996-97. The typical Even Start family was a couple between the ages of 20 and 39, with two to four children. Another large group of families was headed by single parents with two to four children.

FAMILY INCOME AND EMPLOYMENT STATUS

More than 80 percent of Even Start families in the last three program years had annual incomes under $15,000; 41 percent of 1996-97 enrollees earned and/or received annual incomes under $6,000.

- *Based on conservative estimates (erring on the side of overestimating household income), 90 percent of Even Start families participating in 1996-97 had incomes at or substantially below the federal poverty level.*

- *For 43 percent of new families who enrolled in 1996-97, government assistance was the primary source of income.*

- *Employment wages constituted the primary source of income for 49 percent of new families.*

However, only 26 percent of *participating parents* were employed at the time of intake in 1996-97. Of these, slightly more than half had full-time jobs. This suggests that family members not participating in Even Start were the primary wage earners in many families. For 28 percent of new families, their annual income of $6,000 or less came primarily from government assistance.

- *There are some indications that the percentage of families that rely mostly on wages may be increasing and those relying mostly on government assistance decreasing.*

A slight decline in receipt of government assistance was consistent across all parent age groups. If the family income level remains consistently low but the receipt of public assistance declines, one explanation could be the impact of welfare reform. Because the changes in data are fairly slight and welfare reform is still relatively new in most states, these trends need to be monitored closely in the third national evaluation.

PARENTS' EDUCATIONAL BACKGROUNDS AND REASONS FOR PARTICIPATION

Repeating the patterns from the previous three years, 45 percent of 1996-97 new enrollees had not gone beyond 7th to 9th grade; 13 percent of new enrollees had not progressed beyond the primary school grades.

- *The pre-Even Start educational achievements of parents has decreased since the final year of the first evaluation. Seventy-nine percent of adults who enrolled in 1992-93 had not earned a high school diploma or GED, compared to 85 percent of 1996-97 new enrollees.*

For roughly 60 percent of Even Start parents, Even Start represented their first experience with adult education programs. Similarly, only a small percentage (7 percent or less) had participated in employment or vocational training, either before or at the time of enrolling in Even Start. Fifty-eight percent of children enrolling in 1996-97 had received no early childhood education services prior to their association with Even Start. This reflects, at least in part, the increasing percentage of infants and toddlers among new families.

PARENTS' RACE/ETHNICITY AND ENGLISH PROFICIENCY

The racial/ethnic composition of Even Start participants has been changing since 1992-93.

- *The proportion of Hispanic families in Even Start has increased from 22 percent in 1992-93 to 39 percent in 1996-97.*
- *The second largest minority group has been African American, representing 23-26 percent of the Even Start population since 1992-93.*
- *Asian, American Indian, and other groups collectively constituted 7 percent of the 1996-97 new enrollees. However, the diversity of Asian languages represented in the Even Start program has increased considerably in the last several years.*
- *More than one-third (39 percent) of new families enrolling in 1996-97 were headed by parents who did not speak English at home. About three-quarters of these parents had difficulties in understanding, speaking, and/or reading English.*

The Hispanic and Asian parents' educational experiences averaged between the 8th and 9th grades, with most of their schooling completed outside the United States. Since 1992-93, projects have enrolled higher percentages of parents with no high school diploma or GED as well as parents with limited English proficiency. Although the majority of Even Start parents lack a few years of high school education, many older parents who are Hispanic or Asian present much greater needs for services.

EXTENT OF NEED AMONG EVEN START FAMILIES

Multiple disadvantages characterize most Even Start families. The neediest families participating in 1996-97 were identified based on the following seven indicators:

1) Families at or below the federal poverty index (90 percent of all families participating in 1996-97);

2) Families in which at least one participating parent has a 9th-grade or lower education (48 percent of families);

3) Families relying on government assistance as the primary source of income and/or receiving government assistance at the time of enrollment (59 percent of families);

4) Families headed by parents for whom it was difficult or who were unable to read, speak, or understand English (33 percent of all 1996-97 participating families);

5) Families headed by single parents (36 percent);

6) Families with four or more children under the age of 16 (40 percent); and

7) Families in which at least one participating child has a disability (e.g., speech/language impairment, visual impairment, mental retardation, or learning disability) (14 percent of families).[4]

Projects are required to recruit and serve families most in need of Even Start services in their communities. While the general level of need is likely to vary in different communities, the average Even Start family had three of the seven need indicators.

- *Forty-five percent of Even Start families experienced four or more of the following circumstances (and were identified as "very needy families" for the purposes of analysis): having annual income at or below the federal poverty level, having 9th-grade or lower education, receiving government assistance, having limited English proficiency, being a single parent, and/or raising four or more children, one of whom may have a disability.*

When asked for one primary reason for enrolling in Even Start, the most frequently cited explanation by parents was to improve their own educational status, followed by the desire to learn English and improving their child's chances for academic success. The primary reasons for enrollment have remained essentially the same since 1994-95.

RESOURCES SUPPORTING EVEN START SERVICES

Even Start projects are indeed recruiting and serving very needy families with multiple disadvantages. What resources are available to provide services to these families?

The patterns of funding at the project level appear to be shifting toward increasing contributions of non-Even Start funds supporting Even Start services. This is consistent with the legislation, which sets a minimum level of non-Even Start contributions by stipulating that the portion of the total budget supported by Even Start funds must decrease by 10 percent each year. This means that the non-Even Start ("local") matching funds must constitute at least 40 percent of annual operating budget by year four. Further, projects that receive a subsequent grant or grants must obtain at least 50 percent of their budget from non-Even Start sources in all years of these grants. In 1996-97, the eighth year of the Even Start program, roughly 30 percent of projects had received federal Even Start funds for five or more years. Aside from funding patterns, many aspects of program operations (e.g., staffing and interagency collaboration) have remained largely unchanged over the past several years.

---

[4] The percentages of *all 1996-97 participating families* identified as having each of the seven need indicators are shown in parentheses. Some need indicators are based on data collected at individual adult and child levels, summarized to the family level for families with multiple adults and children participating (i.e., *at least one adult or one child* reported the "need" condition). Further, the need index for "families receiving welfare" was based on answers to *either one of two questions* related to receipt of welfare. Due to these steps taken in creating the need index variables, some of the *family percentages* differ from percentages reported elsewhere in this report for *adults, children*, and *one variable at a time*.

PROGRAM FUNDING

With all federal, state, and local resources combined, the average annual budget for Even Start projects in 1996-97 was $250,267, nearly $5,000 per project more than in the previous program year. While the federal Even Start funds per project have decreased in the last two years, the average local contributions[5] increased—from $87,161 in 1994-95 and $108,718 in 1995-96 to $115,960 in 1996-97.

- *With all types of funds combined, the projects' average budget per family has been increasing each year—from $3,709 in 1993-94 to $4,495 in 1996-97.*[6] *However, focusing only on the federal Even Start funds, the average amount available per family has remained remarkably stable at $2,700-$2,800 per year since 1993-94.*

These results suggest combined effects of (1) a slight reduction in the average number of families served by each project (from sixty families per project in 1994-95 to fifty-five in 1995-96 and 1996-97), and (2) the increasing local contributions.

EVEN START STAFF

The Even Start staff composition, qualifications, experience, and training have remained essentially unchanged since 1993-94. The average project had a staff of ten Even Start-paid persons that included one project administrator, three to four teachers, one to two teachers' aides, one family specialist, one support service provider, one evaluator, and one administrative support person. Three-quarters of the Even Start-paid instructors had at least a bachelor's degree; and 25 percent had a master's degree. Ninety-six percent of aides had at least a high school diploma or GED, and 10 percent had a four-year degree. Over half of all Even Start instructors had six or more years of teaching experience. On average, in 1996-97, Even Start staff received five to eight days of inservice training, depending on job category.

---

[5] "Local contributions" can include state, local, and non-Even Start federal funds. In submitting fiscal data for the national evaluation, some projects may have underreported the amount of local contributions due to omissions of some in-kind resources.

[6] The analysis of change in the average cost per family does not account for inflation over time.

INTERAGENCY COLLABORATION

Even Start is intended to serve as the "glue" that facilitates coordination of existing services and resources available for low-income families in the community. While a variety of agencies and organizations collaborate with Even Start projects, Even Start staff provide direct services in educational areas that are less frequently served by other sources in the community. The collaborative efforts described below are based on the 1996-97 data which closely represent the findings for the previous three years.

- *The contribution of collaborating agencies in Even Start instructional programs was most prominent in adult education.*

For approximately one-third of project sites, collaborating agencies were solely responsible for providing educational services in all levels of adult education; Even Start and collaborating agency staff shared responsibilities in about one-quarter of project sites. Public school departments (other than the specific departments sponsoring Even Start) on the one hand, and colleges and universities on the other, served as primary providers of adult education services for 34 percent and 21 percent of project sites, respectively.

- *For parenting education services, which are less commonly available than adult education programs in most communities, 60 percent of project sites relied solely on Even Start staff to deliver services.*

Agencies serving as secondary providers of parenting education included: community groups (59 percent); public school departments (51 percent); government agencies (51 percent); and Head Start (50 percent).

- *Resources for serving infants and toddlers came exclusively from Even Start for 70 percent of project sites, while collaborating agencies played a greater role in serving older children.*

Projects relied on public schools (33 percent), Head Start (25 percent), and other preschool and daycare programs (18 percent) as primary service providers.

CHALLENGES IN PROGRAM IMPLEMENTATION

Annually, projects are asked to prioritize areas in which they need technical assistance. Since 1993-94, funding or fiscal issues and increasing participant involvement and retention have been cited as areas needing the most assistance. More than half the projects reported some need for technical assistance in the following areas: participant retention; staff development; identifying effective programs; use of computers; approaches to adult and parenting education; sharing information with other projects; balancing program resources between educational and support services; and handling the social or health problems of participants.

EVEN START SERVICES

Over half of the Even Start projects were located in rural areas; 35 percent were in urban areas. In many communities, adult education as well as early childhood education programs for children ages 3 to 5 years were available through other auspices. However, family literacy programs, educational services for infants and toddlers, and parenting education were available in fewer than half of the communities. In these community contexts, what are the services that Even Start provides to participating families?

PARTICIPANT RECRUITMENT

For potential program participants, Even Start service begins with recruitment and screening. Projects used a wide variety of recruitment methods. Throughout Even Start's program history, word of mouth and referrals through collaborating agencies and other community agencies were the most commonly used recruitment strategies. Older projects with several years of Even Start experience used methods that target individual families (e.g., home visits, telephone contacts, and walking the neighborhood) more than first-year projects, while first-year projects used methods that reach many potential participants (e.g., mass mailing, mass media, posters and flyers, and making presentations in community agencies) more than projects with four or more years of experience.

In recruiting participants, many projects target families with specific characteristics and needs. Criteria most often used for targeted recruitment were (a) parents with no high school diploma, and (b) families with preschool-aged children. The proportion of project sites targeting teen parents increased from 44 percent in 1994-95 to 58 percent in 1996-97. On the other hand, relatively fewer projects (41 percent) used family incomes below specific levels as targeting criteria in 1996-97 compared to 1994-95 (56 percent). Judging from the pervasive poverty reported by program participants, projects may be expanding the needs assessment to include various criteria beyond low income to ensure that families most in need of services are recruited.

AMOUNT OF EDUCATIONAL SERVICES OFFERED

- *Service intensity, measured in hours of instructional services offered to participants, has increased steadily during the four years of the second evaluation.*

For example, for adult education, the average increases from 1993-94 to 1996-97 ranged from thirty-five to ninety-two hours per year, depending on educational levels. During the same four years, the increase in the average hours of educational services offered to children was 200 or more hours per year depending on the age of children.

- *Reflecting the increased enrollment of teen parents, services for infants and toddlers under age 3 have expanded in intensity as well as availability.*

Annual service hours rose from an average of 280 hours in 1993-94 to 406 hours in 1996-97, an increase of ten to eleven hours per month. The number of project sites offering services to infants and toddlers also increased from 71 percent in 1994-95 to 84 percent in 1996-97. Thus, projects are accommodating to the increased enrollment of infants and toddlers by expanding services for this age group—both in terms of availability as well as intensity. This also suggests that more children are benefiting from the Even Start services (e.g., early childhood education, parenting education services for their parents, early intervention services) from an earlier age than was common in previous years.

- *The hours offered for parenting education have been relatively stable at around 200 hours per year per parent since 1994-95.*

While the intensity of services has increased generally, every year we have found great variation across projects in the amount of services offered. Several project characteristics were related to the variation in service intensity.

- *Project sites serving high percentages of very needy families (with four or more of the seven need indicators) offered more adult and parenting education hours than sites with lower percentages of very needy families.*
- *Project sites with higher percentages of teen parents offered more instructional hours in adult education and early childhood education than sites with fewer teen parents.*
- *Projects with larger budgets offered more hours of adult and early childhood education.*
- *Across all service areas, center-based projects provided more hours of services than did home-based projects.*

EVEN START CURRICULUM

Even Start projects are required to provide participants with services in three core areas (adult basic or adult literacy education, parenting education, and early childhood education) as well as home-based instruction, parent-child joint activities, and support services. However, there is no single Even Start model. A majority of project sites designed their own educational programs, incorporating features of existing approaches.

- *Projects have increasingly incorporated functional literacy into adult education programs.*
- *Life skills and parenting issues have been common topics of adult education lessons over the last three years; however, inclusion of vocational topics is increasing, possibly as a response to and as a result of welfare reform.*

The proportion of projects using vocational materials for the beginning, intermediate, secondary, and English-as-a-second-language (ESL) classes increased between 5 and 13 percentage points between 1994-95 and 1996-97.

In parenting education, a majority of projects addressed topics related to child development; the development of language, thinking, motor, and social skills; and ways to ensure a child's safety and well-being. Almost all projects included parent-child literacy activities as part of their parenting education curriculum. On average, in 1996-97 a family was offered three hours per month of structured parent-child activities through home visits, eight hours in a center-based environment, and five hours of special events such as field trips. Topics addressed through these activities included: reading and storytelling; language development exercises; child's social development, independence, self-discipline, and self-help skills; health and nutrition; early academic skills; arts and crafts; sensory stimulation; and gross motor skills.

The integration of instructional activities across the three core service areas is one of the key elements of Even Start. Parenting and early childhood education, as well as parenting and adult education, were most commonly integrated through parent-child joint activities.

To facilitate families' participation in Even Start educational activities, projects provided a wide range of support services, either directly or through referrals. The support services most often received by Even Start parents and children were child care, transportation, family support (e.g., counseling and support groups), and meals. As we discuss below, families receiving more support services participated more in the educational services offered by Even Start.

EXTENT OF PARTICIPATION BY FAMILIES

Even Start projects implement many strategies to address the diverse educational needs of participants and provide support services to enable the families to benefit from the educational opportunities.

- *In 1996-97, 94 percent of parents participated in adult education; 95 percent participated in parenting education; 95 percent of children participated in Even Start early childhood education activities; and 93 percent of families participated in all three core service areas.*[7]

---

[7] Approximately 15 percent of participating families and adults in 1996-97 had missing data regarding their participation in adult and/or parenting education. The participation rates cited above are based on participants *with data, excluding those with missing data.* The precision of data and method for computing participation rates have been refined every year during the second evaluation. Thus, the changes in participation rates over the years partly reflect these methodological changes. Computing participation rates by treating records with missing data as non-participants yielded 89, 91, and 78 percent for adult education, parenting education, and all core services, respectively, for 1996-97; compared to 85, 88, and 75 percent for 1995-96. In all years, well over 90 percent of children participated in Even Start early childhood education services.

- *On average, Even Start parents participated in ninety-six hours of adult education services and twenty-eight hours of parenting education during 1996-97. (These averages include parents who specifically reported zero hours of participation.)*

- *Nearly one-third of children participated for only one to three months (including children who enrolled near the end of the evaluation year). About one-fourth of children participated for ten to twelve months. The majority of children attended Even Start activities regularly while they were participating.*

A number of participant and project characteristics were associated with various measures of participation rates. Three factors that consistently emerged as factors contributing to families' participation were service intensity (i.e., hours of educational services offered), amount of support services that families received, and integration of instructional activities across core service areas.

- *Thus, families enrolled in projects that offered more hours of instructional services and more integrated services and families that received more support services participated to a greater extent in Even Start educational services.*

Since 1994-95, we have found a strong relationship between the number of contact hours that projects scheduled per participant and the hours that parents and children actually participated. For example, in 1996-97, projects offering more than forty-four hours per month of adult education services reported an average of 144 hours per year of participation while the average participation hours were reduced by half among projects offering less than fourteen hours per month of adult education services. Similarly, for parenting education, parents in projects that offered less than fourteen hours per month of parenting education averaged only eighteen to twenty hours annually. In contrast, parents in projects offering more than twenty-three hours per month of parenting education averaged forty-two hours per year of participation.

The number of support services received by families was consistently associated with higher levels of participation in adult, parenting, and early childhood education programs. As a group, families who received five to nine types of support services were also more likely to participate in all three core educational components than families receiving fewer support services.

Integration of the three core educational services was associated with greater participation in adult and parenting education. Children enrolled in projects with highly integrated educational programs were significantly more likely than those in less integrated programs to have received ten to twelve months of early childhood education. These findings may suggest that integrated curricula meet the families' multiple educational needs more effectively than the traditionally compartmentalized approaches.

RETENTION AND REASONS FOR LEAVING

- *Each year since 1994-95, 6-7 percent of all participants left Even Start having completed their program goals.*

Again, referring to the 1996-97 data, the completion rate was 9 percent for families that continued participation from previous years and 5 percent for new enrollees. Among families who continued from previous years (who were more likely to complete the program than new enrollees), teen parents who enrolled with at least a 10th-grade education had the highest rate of completion (18-33 percent).

Parents who were native English speakers were three times more likely to complete the program than were parents with limited English proficiency (9 percent versus 3 percent). Even among families with limited English proficiency, however, parents who entered Even Start with at least a 10th-grade education and had continued participation since previous year(s) had completion rates of 10-12 percent.

- *Excluding families who left the program after having completed their goals, 60 percent of families in 1996-97 were continuing participation at the end of the program year (64 percent of new families; 54 percent of families continuing from previous years).*

Closely repeating the findings from the previous two years,[8] among the 1996-97 new enrollees, parents 30 years or older were more likely to be continuing (69-71 percent) than younger parents (59-62 percent). Families in which parents had either 6th-grade or less education or high school diploma or higher were more likely to be continuing (72 and 69 percent, respectively) than families with mid-level parental education (61 percent). New families that received many types of support services were more likely to be continuing (70 percent) than new families that had received little or no support services (59 percent).

Since 1994-95, the breakdown of families that were continuing participation at year-end versus those who left before the year-end has been roughly 60/40 percent. However, each year, we observed that some families that were reported to be continuing did not return to the program in the following year. For example, only 41 percent of new families who enrolled in 1995-96 actually continued into 1996-97. Data collected in the third national evaluation will allow much more in-depth analyses of Even Start participation patterns.

---

[8] Data on reasons for program exit were not collected in 1993-94. Data reported in the final report of the first evaluation are not directly comparable to the recent data due to changes in the data collection form and to a large percentage of families (30 percent) who exited the program in 1992-93 whose reasons for termination were not reported.

Sixteen percent of all families that were in the program in 1996-97 terminated due to a combination of factors such as poor attendance, lack of interest, and family problems.

SERVICES PROVIDED TO THE NEEDIEST OF EVEN START FAMILIES

To help families continue participation in spite of multiple difficulties, projects provided more support services to families with five or more needs than to families with few or no special needs. How well were these very needy families able to participate in Even Start educational services?

In terms of participation rates, the results are encouraging. Despite greater disadvantages, the very needy families participated in all core service areas at least as much as less needy families. Data on the year-end status, however, shed further light on the plight of the very needy families.

- *Parents from very needy families participated in more hours of adult education than parents of less needy families. A higher percentage of children from very needy families participated in Even Start for 10-12 months compared to children from less needy families.*
- *Each year, the very needy families were less likely to complete their educational goals or be continuing at year-end than families with fewer needs.*

Somewhat higher percentages of families with four or more needs were terminated due to low motivation and attendance. This pattern of findings has been replicated each year since 1994-95.

CONCLUSIONS

Over the past eight years, the Even Start program has clearly begun to achieve some of its overarching goals. Even Start has been able to provide unified family literacy experiences for children and their families through an integrated program of early childhood education for children, parenting education, and adult literacy and adult basic education for adults. The first national evaluation indicated that children participating in Even Start made greater gains on some measures than children in a comparison group, and that adults were more likely to complete the requirements for attaining a GED. Participants progressed on some of the educational and developmental measures used, although the progress of Even Start participants was not consistently better than the progress of individuals in a comparison group.

Some of the findings from the first few years of the program and its evaluation led to changes in the legislation, including the requirements for local projects to recruit and serve families most-in-need in their respective communities; provide intensive instructional services in all three core areas; offer services on a year-round calendar; and demonstrate coordination, not duplication, of available services.

Many of the programmatic trends observed earlier have persisted. Although the amount of instruction offered and received in core instructional areas has increased over the average levels of the first four years, the changes from year to year appear to be leveling off. At the same time, there have been changes in who participates in Even Start. The Even Start program is now serving more teen parents, greater proportions of Hispanic/Latino families, and more families with greater evidence of disadvantage than during the early years of the program.

Along with changes in the composition of the participant population, the patterns of participation have changed as well. Families with teen parents do not remain enrolled in the program as long as older parents, on average; those with higher (or needier) average scores on the need index participate intensively for limited amounts of time. Families whose primary language is not English are more likely to remain active participants for longer periods of time. These patterns highlight the recurring tension between providing services to families most in need while sustaining their active involvement. Additionally, these differential participation rates raise some provocative questions about how to design program services to serve the majority of families who participate only for a limited time as well as how to evaluate service effectiveness.

Participants in Even Start did make progress on the outcome measures used in the second evaluation. The fact that we have been able to observe growth over time *within* individual children on both the PSI and the PLS-3 suggests that participation in a program like Even Start might help spur accelerated learning, as measured by these outcomes. One of the paradoxes we face, however, is that while we have indeed observed changes in outcome measures—particularly for children—the second evaluation design did not allow us to attribute such progress to participation in Even Start. When we consider the findings from the first national evaluation, which did have a random assignment component, in tandem with the current findings, the value of a strong research design becomes even more critical.

From the long-term study of the Even Start program, several key issues have surfaced concerning the directions for future evaluation. The issues include: identifying educational or other progress indicators that are appropriate for the diverse program population; ensuring consistency and quality of evaluation data collection and test administration; use of comparison groups; and matching data collection to actual participation patterns. Many of the lessons learned from the past eight years are being considered in the third national evaluation currently underway.

CONTENTS

Acknowledgments iii

Executive Summary v

Chapter 1: Introduction 1

The Even Start Program: Legislation and Administration 1

Program Growth: First Eight Years 4

Principal Components of the Even Start Approach 6

Variations Upon the Basic Model 10

Organization of the Report 11

Chapter 2: Even Start National Evaluation 15

The First Even Start National Evaluation 15

Design of the Second Even Start National Evaluation 16

Scope of the Second National Evaluation 23

Chapter 3: What Are the Needs of Even Start Families? 29

How Many Families Were Served in Even Start? 30

What Were the Demographic Characteristics of Even Start Families? 31

What Were the Even Start Participants' Needs for Educational Services? 41

How Many Children Have Special Needs? 49

Who Are the Neediest of Even Start Families? 50

Parents' Reasons for Participating in Even Start 55

What Are the Needs of Even Start Families?: A Review 57

Chapter 4: What Resources Support the Even Start Services? 59

Where Are Even Start Projects Located? What Non-Even Start Services Are Available in Communities? 60

What Organizations Operate the Even Start Program? 61

How Are Even Start Services Funded? 61

How Are the Even Start Services Staffed? 65

What Inservice Training Do Even Start Staff Receive? 66

To What Extent Do Collaborating Agencies Provide the Core Educational Services? 68

What Are Major Challenges in Implementing Even Start? 71

What Are Projects' Technical Assistance Needs? 73

What Are Projects' Evaluation Activities and Plans for Continuation After the Current Grant Expires? 75

Chapter 5: What Services Do Even Start Projects Provide to Participants? 77

How Are Families Recruited and Screened? 77

How Many Instructional Hours Are Offered by Even Start? 81

What Educational Approaches Do Local Projects Use? 89

In What Contexts Are Adult Education Services Provided? 90

What Are the Contents of Parenting Education? 92

How Are the Core Educational Programs Integrated? 95

What Transitional Services Are Provided to Children Moving to Kindergarten and Primary School?96

How Do Projects Accommodate Participants' Needs? 97

Chapter 6: To What Extent Did Even Start Families Participate in the Services Offered? ... 101

How Many Home Visits Were Made to Families? 103

What Was the Extent of Participation in Adult and Parenting Education? 104

What Was the Extent of Participation in Early Childhood Education? 112

What Percentage of Families Participated in All Three Core Components? 115

What Aspects of Even Start Services Are Related to Participation Rates? 116

What Were the Patterns of Retention? 119

To What Extent Did the Very Needy Families Participate in Even Start Services? 124

Summary of Participation Rates for Other Participant Groups 126

Chapter 7: What Are the Educational and Developmental Outcomes? 129

What Were the Child Development Outcomes? 131

What Were the Parenting Outcomes? 146

What Were the Adult Education Outcomes? 150

What Were the Outcomes on Other Progress Indicators? 160

Chapter 8: Findings from Two Evaluations 165

Adult Education Development 169

Chapter 9: Conclusions 175

Lessons Learned About the Even Start Program 176

Lessons Learned About Evaluation of the Even Start Program 178

Insights into Evaluation of the Impact of the Even Start Program 179

Future Evaluation Questions 181
Future Directions 182

References 183

Appendix A: Even Start Legislation A1

Appendix B: Additional Data Tables B1

Appendix C: Multivariate Analyses in Chapters 5 and 6 .... C1

Analysis Method C1
Rationale C7
Regression Analysis Result Summary Tables C10

Appendix D: Additional Information About the Sample Study D1

Content Validity of Measures Used in the Sample Study D1
Pretest Scores on the Outcome Measures Used for the Sample Study D2

Index I1

EXHIBITS

Chapter 1: Introduction

Exhibit 1.1: Number of Even Start Projects and Participating Families Since Program Inception 4
Exhibit 1.2: Locations of Even Start Projects in 1996-97 5
Exhibit 1.3: Even Start Conceptual Model 9
Exhibit 1.4: Framework for Reporting the Even Start National Evaluation 12

Chapter 2: Even Start National Evaluation

Exhibit 2.1: Components of the Even Start Evaluation 17
Exhibit 2.2: Number of Projects Included in the Even Start National Evaluation: Program Years 1993-97 24
Exhibit 2.3: Number of Parents and Children in the Sample Study at Pretest and Posttest (1994-95, 1995-96, and 1996-97) 26

Chapter 3: What Are the Needs of Even Start Families?

Exhibit 3.1: 1996-97 Even Start Participants (Estimated for All 637 Projects Operating in 1996-97) 31
Exhibit 3.2: Percent of Parents, by Age: 1994-95, 1995-96, and 1996-97 Participants 33
Exhibit 3.3: Percent of Participating Children, by Age: 1994-95, 1995-96, and 1996-97 Participants 34
Exhibit 3.4: Percent of Children, by Age and Age of Parents: 1996-97 New Enrollees 34
Exhibit 3.5: Percent of Families by Family Structure: 1992-93 and 1994-95 Participants, 1995-96 and 1996-97 New Enrollees 35
Exhibit 3.6: Percent of Families, by Family Annual Income: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees 37
Exhibit 3.7: Percent of Families by Primary Source of Family Income: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees 38
Exhibit 3.8: Percent of Families, by Primary Source of Family Income and Income Level: 1996-97 New Enrollees 38
Exhibit 3.9: Percent of 1995-96 and 1996-97 New Enrollees Receiving Government Assistance at the Time of Enrollment, by Parent's Age 39
Exhibit 3.10: Employment Status and Plans of Parents Who Enrolled in 1996-97, by Parent Age 40
Exhibit 3.11: Percent of Parents, by Educational Background at Enrollment: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees 41
Exhibit 3.12: Percent of Parents, by Educational Background at Enrollment and Parent Age: 1996-97 New Enrollees 43

Exhibit 3.13: Percent of Parents, by Previous Adult Education Experiences: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees 44

Exhibit 3.14: Racial/Ethnic Backgrounds of Even Start Parents: 1992-93, 1994-95, 1995-96, and 1996-97 Participants 45

Exhibit 3.15: Racial/Ethnic Backgrounds of Even Start Parents, by Region: 1996-97 Participants 46

Exhibit 3.16: Percent of Parents Who Had Lived in the United States for Five Years or Less at the Time of Enrollment, by Race/Ethnicity: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees 47

Exhibit 3.17: Percent of ESL Parents, by Limited English Proficiency Level: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees 48

Exhibit 3.18: Average Years of Education Completed at Enrollment, by Parent Age and Race/Ethnicity (1996-97) 48

Exhibit 3.19: Average Need Index, by Region and Type of Community: 1996-97 Participants 54

Exhibit 3.20: Average Need Index, by Parent Race/Ethnicity and Age: 1996-97 Participants 54

Exhibit 3.21: Percent of Parents, by Primary Reason for Participation and Parent Age: 1996-97 New Enrollees 56

Chapter 4: What Resources Support the Even Start Services?

Exhibit 4.1: Percent of Projects Reporting Availability of Non-Even Start Educational Services in Their Communities (1996-97) 60

Exhibit 4.2: Project Age (Years of Operating Even Start) as of 1996-97 62

Exhibit 4.3: Levels of Funding for Even Start Projects (1996-97) 63

Exhibit 4.4: Even Start Program Funds per Family per Year (1994-97) 64

Exhibit 4.5: Number of Even Start Paid Staff and Their Assignments (1996-97) 65

Exhibit 4.6: Academic Degrees and Years of Experience of Even Start Instructors and Aides (1996-97) 66

Exhibit 4.7: Percent of Project Sites Coordinating Services with Collaborating Agencies, by Educational Service Area (1996-97) 69

Exhibit 4.8: Percent of Project Sites Where Collaborating Agencies Were the Primary or Secondary Providers of Adult, Parenting, and Early Childhood Education (ECE) Services (1996-97) 70

Exhibit 4.9: Percent of Projects Reporting Barriers to Program Implementation (1996-97) 71

Exhibit 4.10: Projects' Need for Technical Assistance: Educational Services (1996-97) 73

Exhibit 4.11: Projects' Need for Technical Assistance: Support Services (1996-97) 74

Exhibit 4.12: Projects' Need for Technical Assistance: Program Operation Issues (1996-97) 74

Exhibit 4.13: Plans for Continuation After Current Multi-Year Grant Expires (1996-97) 76

Chapter 5: What Services Do Even Start Projects Provide to Participants?

Exhibit 5.1: Criteria for Targeting Services to a Segment of the Eligible Population (1994-95, 1995-96, and 1996-97) ... 78
Exhibit 5.2: Percent of Project Sites Using Special Recruitment Strategies "a Great Deal" (1996-97) ... 79
Exhibit 5.3: Percent of Project Sites, by Formal Steps Used "a Great Deal" in Screening Potential Participants (1996-97) ... 80
Exhibit 5.4: Hours of Instructional Services Offered per Year per Participant in Adult and Parenting Education (1993-94 to 1996-97) ... 82
Exhibit 5.5: Hours of Instructional Services Offered per Year per Participant in Early Childhood Education (1993-94 to 1996-97) ... 83
Exhibit 5.6: Average Hours of Adult Education Offered per Month, by Home- vs. Center-based Services and Percent of Teen Parents (1996-97) ... 87
Exhibit 5.7: Average Hours of Parenting Education Offered per Month, by Home- vs. Center-based Services and Percent of Very Needy Families (1996-97) ... 88
Exhibit 5.8: Average Hours of Early Childhood Education Offered per Month, by Home- vs. Center-based Services and Project Budget (1996-97) ... 88
Exhibit 5.9: Characteristics of Adult Education Services (1996-97) ... 91
Exhibit 5.10: Percent of Project Sites Providing Various Parenting Education Activities to "Most Families" (1996-97) ... 92
Exhibit 5.11: Hours per Month of Parent-Child Joint Activities Offered, by Setting (1994-95, 1995-96, and 1996-97) ... 94
Exhibit 5.12: Percent of Project Sites Offering Various Parent-Child Activities to "Most Families" (1996-97) ... 94
Exhibit 5.13: Percent of Project Sites, by Nature of Integration of Even Start Core Services "Always/Usually" (1996-97) ... 95
Exhibit 5.14: Transitional Services Even Start Projects Provide to Children (1995-96 and 1996-97) ... 97
Exhibit 5.15: Percent of Project Sites, by Families' Need for Support Services ("All" and "Many" Families) (1996-97) ... 98
Exhibit 5.16: Percent of Parents and Children Receiving Support Services (1996-97) ... 99
Exhibit 5.17: Flexibility in Scheduling of Even Start Services to Accommodate Adult Participants (1996-97) ... 100

Chapter 6: To What Extent Did Even Start Families Participate in the Services Offered?

Exhibit 6.1: Participant and Project Characteristics Examined in Multivariate Analyses ... 102
Exhibit 6.2: Average Number of Home Visits per Year, by Number of Support Services Received by the Family, Project Age, Home- vs. Center-based Services, and Flexibility of Services Offered (1996-97) ... 104

Exhibit 6.3: Percent of Parents Participating in Adult and Parenting Education Services, by Pre-Even Start Educational Level and English Proficiency (1996-97) 105

Exhibit 6.4: Annual Hours of Participation in Adult Education, by Project Characteristics: 1996-97 Participants 108

Exhibit 6.5: Annual Hours of Participation in Adult Education, by Parents' Age and Educational Background (1996-97) 109

Exhibit 6.6: Annual Hours of Participation in Parenting Education, by Project Characteristics: 1996-97 Participants 111

Exhibit 6.7: Percent of Children Participating in Early Childhood Education Programs, by Child's Age: 1996-97 Participants 112

Exhibit 6.8: Rates of Children Participating in Even Start for 10-12 Months, by Child's Age and New vs. Continuing Status (1996-97) 114

Exhibit 6.9: Rates of Families Participating in All Three Core Services, by Project Characteristics: 1996-97 Participants 116

Exhibit 6.10: Annual Hours of Participation in Adult Education and Parenting Education, by Hours/Month Services Offered in the Respective Service Area (1996-97) 118

Exhibit 6.11: Percent of Families, by Years of Participation in Even Start 120

Exhibit 6.12: Program Completion Rates of Parents, by Age, Educational Level, and New vs. Continuing Status (1996-97) 122

Exhibit 6.13: Percent of New and Continuing Families, by Year-end Participation Status (1996-97) 123

Exhibit 6.14: Percent of Families That Continued from Previous Year(s) but Left the Program for Lack of Motivation, by Parent Age and Education (1996-97) 124

Exhibit 6.15: Annual Hours of Participation in Adult and Parenting Education, by Family Need Index (1996-97) 125

Exhibit 6.16: Percent of Families, by Number of Needs and Year-end Status (1996-97) 126

Exhibit 6.17: Year-end Participation Results of Various Participant Groups (1996-97) 127

Chapter 7: What Are the Educational and Developmental Outcomes?

Exhibit 7.1: Sample Study Participants and Assessment Schedules: Family Level 131

Exhibit 7.2: Multi-level Models for Examining Growth Over Time on the PSI 138

Exhibit 7.3: Multi-level Models for Examining Growth Over Time on the PLS 139

Exhibit 7.4: Predicted PSI Scores, by Child Age, in Months 142

Exhibit 7.5: Predicted PLS Scores, by Child Age, in Months 146

Exhibit 7.6: Pretest and Posttest Scores on the HSQ (Raw Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) 148

Exhibit 7.7: Selected Regression Coefficients for Parenting and Adult Outcome Measures 149

Exhibit 7.8: Pretest and Posttest Scores on the CASAS (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) 152

Exhibit 7.9: Pretest and Posttest Literacy Levels on CASAS Reading (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) 153

Exhibit 7.10: Pretest and Posttest Literacy Levels on CASAS Math (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) 153

Exhibit 7.11: Pretest and Posttest Scores on the TABE (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) 157

Exhibit 7.12: Grade Equivalent Scores Corresponding to TABE Reading and Math Quartiles at Pretest and Posttest (1994-95, 1995-96, and 1996-97) 158

Exhibit 7.13: Average Adult Education and Parenting Hours, by Year, by Wave 159

Exhibit 7.14: Average Total Amount of Adult Education and Parenting Education Instructional Service Hours Received, by Primary Language, 1994-95 Through 1996-97 160

Exhibit 7.15: Progress Toward GED Certificate Among Adults Without High School Diploma or GED (Universe Study and Sample Study, 1994-95, 1995-96, and 1996-97) 162

Exhibit 7.16: Employment Status at Beginning and End of 1994-95, 1995-96, and 1996-97 Even Start Years (Universe Study and Sample Study) 163

Exhibit 7.17: Other Progress Indicators for Even Start Adults (Universe Study and Sample Study, 1996-97) 164

Chapter 8: Findings from Two Evaluations

Exhibit 8.1: PSI Growth for Different Even Start Evaluation Samples, Compared with Developmental Growth 166

Exhibit 8.2: PPVT Growth for Different Even Start Evaluation Samples 168

Exhibit 8.3: PLS-3 Growth for the ESIS Evaluation Sample 169

Exhibit 8.4: CASAS Reading Growth for Different Even Start Samples 170

Exhibit 8.5: CASAS Math Growth for the ESIS Evaluation Sample 171

Exhibit 8.6: TABE Reading and Math Growth for the ESIS Evaluation Samples 172

Exhibit 8.7: Rate of GED Attainment for Different Even Start Evaluation Samples 173

Appendix B: Additional Data Tables

Exhibit B.1: Number of Projects that Submitted 1996-97 Even Start National Evaluation Data, by State and Type of Project (Referenced in Chapter 2) B1

Exhibit B.2: Percent of Children Participating in Non-Even Start Educational Programs Before and at the Time of Enrolling in Even Start: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees (Referenced in Chapter 3) B2

Exhibit B.3: Percent of Children with Special Needs, by Type of Needs: 1994-95, 1995-96, and 1996-97 Participants (Referenced in Chapter 3) B3

Exhibit B.4: Correlations Among Family Need Indicators (1996-97) (Referenced in Chapter 3) B3

Exhibit B.5: Community-Based Organization Partners in Even Start Projects (1996-97) (Referenced in Chapter 4)B B3
Exhibit B.6: Percent of Projects Providing Inservice Training for Most of Their Staff, by Training Topics (1996-97) (Referenced in Chapter 4) B4
Exhibit B.7: Number of Instructors, by Salary Source and Student Contact (1996-97) (Referenced in Chapter 4) B5
Exhibit B.8: Solutions to Implementation Barriers (1996-97) (Referenced in Chapter 4) B5
Exhibit B.9: Instructional Services Offered in Three Core Components (Average Across Reporting Project Sites, 1996-97) (Referenced in Chapter 5) B10
Exhibit B.10: Characteristics of Even Start Educational Curricula (1996-97) (Referenced in Chapter 5) B11
Exhibit B.11: Other Reasons for Families Discontinuing Participation in Even Start (1996-97) (Referenced in Chapter 6) B12

Appendix C: Multivariate Analyses in Chapters 5 and 6

Exhibit C.1: Variables Used in Chapters 5 and 6 Multiple Regression Analyses C3
Exhibit C.2: Correlations Among the Variables Used in Regression Analyses at the Adult Participant Level C5
Exhibit C.3: Summary of Regression Analysis on Hours per Month of Adult Education Offered (1996-97) C10
Exhibit C.4: Summary of Regression Analysis on Hours per Month of Parenting Education Offered (1996-97) C10
Exhibit C.5: Summary of Regression Analysis on Hours per Month of Early Childhood Education Offered (1996-97) C11
Exhibit C.6: Summary of Regression Analysis on Number of Instructional Home Visits Families Received (1996-97) C12
Exhibit C.7: Summary of Regression Analysis on Hours per Year of Participation in Adult Education (1996-97) C13
Exhibit C.8: Summary of Regression Analysis on Hours per Year of Participation in Parenting Education (1996-97) C14
Exhibit C.9: Summary of Regression Analysis on Children Participating in Early Childhood Education for 10-12 Months (1996-97) C15
Exhibit C.10: Summary of Regression Analysis on Families Participating in All Three Core Services (1996-97) C16

Appendix D: Additional Information About the Sample Study

Exhibit D.1: PSI Pretest Scores (Raw Scores from the Sample Study, 1994-95 and 1995-96) D2
Exhibit D.2: PLS-3 Pretest Scores (Total Language Scores from the Sample Study, 1994-95 and 1995-96) D3

Exhibit D.2a, Part 1: Age Equivalent Scores on the PLS-3 at Pretest and Posttest #1 (Raw Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) D4

Exhibit D.2a, Part 2: Age Equivalent Scores on the PLS-3 at Pretest and Posttest #2 (Raw Scores from the Sample Study, 1994-95, 1995-96, and 1996-97) D5

Exhibit D.3: HOME Screening Questionnaire (HSQ) Pretest Scores for Parents of Children Less than 3 Years of Age (Raw Scores from the Sample Study, 1994-95 and 1995-96) D6

Exhibit D.4: HOME Screening Questionnaire Pretest Scores for Parents of Children 3- to 6-Years-Old (Raw Scores from the Sample Study, 1994-95 and 1995-96) D6

Exhibit D.5: CASAS Reading Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96) D7

Exhibit D.6: CASAS Math Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96) D7

Exhibit D.7: TABE Reading Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96) D8

Exhibit D.8: TABE Math Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96) D8

Exhibit D.9: Correlations of Predictors and Gains on Adult Outcomes D9

CHAPTER 1: INTRODUCTION

The Even Start Family Literacy Program addresses the basic educational needs of parents and children of low-income families. This national program was designed to provide adult, parenting, and early childhood education as integrated services to families. Even Start offers (1) adult basic or secondary education and literacy programs for parents; (2) parenting education to assist parents in actively and effectively promoting their children's development; and (3) early childhood education for the children.

Since its inception in 1989, the program has undergone significant changes. The number of projects has grown from seventy-six in 1989 to 637 in 1997. To monitor development of this program, the law that authorizes Even Start mandates a national evaluation of all Even Start projects. Information collected annually provides feedback that is useful to local projects, state and federal administrators, legislators, and policymakers for program improvement and policy development. This information also contributes to the knowledge base on the effects of family literacy programs by investigating the relationships between program processes and outcomes.

The first national evaluation documented the program's development from 1989 to 1993 and provided an early, short-term assessment of its effectiveness (St.Pierre et al., 1995). The second national evaluation covering the next four program years—1993-94 to 1996-97—continued to monitor the course of program development. While continuing to pursue the same basic research questions, the second evaluation employed a revised data collection form and study design to further expand the existing knowledge base regarding this fast-growing demonstration program.

THE EVEN START PROGRAM: LEGISLATION AND ADMINISTRATION

The Even Start Program was first authorized in 1988 as Part B of Chapter 1 of Title I of the Elementary and Secondary Education Act of 1965 (ESEA). The Even Start legislation was amended in July 1991, when Congress passed the National Literacy Act (P.L. 102-73). In 1994, the Even Start program was reauthorized as Part B of Title I of the ESEA as amended by the Improving America's Schools Act.[9] According to the 1994 legislation, the Even Start program is intended to:

> "...help break the cycle of poverty and illiteracy by improving the educational opportunities of the Nation's low-income

---

[9] Even Start projects were required to implement in program year 1995-96 the changes made by the 1994 reauthorization law.

> families by integrating early childhood education, adult literacy or adult basic education, and parenting education into a unified family literacy program ....The program shall (1) be implemented through cooperative projects that build on existing community resources to create a new range of services, (2) promote achievement of the National Education Goals, and (3) assist children and adults from low-income families to achieve to challenging State content standards and challenging State student performance standards." (P.L. 103-382, Sec. 1201)[10]

To be eligible for Even Start, a family must have: (a) a parent who is eligible for adult education services under the Adult Education Act and (b) a child under 8 years of age. Beginning in 1995-96, more teen parents became eligible for Even Start. Since the 1994 reauthorization removed restrictions on services to teen parents who are within a state's compulsory school attendance age range, teen parents in this category may now participate as long as a local education agency provides the basic educational services.[11]

Even Start began as a federally-administered program in School Year 1989-90, with grants totaling $14.5 million awarded to seventy-six projects. According to the Even Start statute, when program funding reached $50 million, the program was to be administered primarily at the state level. In 1992, with the federal appropriation for 340 projects exceeding $70 million, the program administration was assumed for the most part by the states.

Except for projects under Even Start set asides, all projects now are state administered with all fifty states, Puerto Rico, and the District of Columbia participating. Each state receives funding based on the relative proportion of funds it receives under the Title I local education agency (LEA) grants allocation formula. States hold subgrant competitions and make subgrant awards. The statute specifies that each Even Start subgrantee receive a minimum of $75,000 per year in federal Even Start funds, except that one subgrantee per state may receive less.[12]

---

[10] A full text of the Even Start legislation appears in Appendix A.

[11] Prior to this change regarding eligibility of teen parents, Even Start could serve families headed by teen parents at least 16 years old or beyond the age of compulsory school attendance *and only if the parents were not attending school.*

[12] Because of the required "local contribution," the annual total project cost is more than $75,000.

Family literacy programs specifically for migrant agricultural families,[13] Indian tribes and tribal organizations, and outlying areas are supported by a 5-percent set-aside of funds from the total Even Start appropriation. The Department makes grants directly to eligible applicants to support the implementation of the Even Start family literacy approach. Since 1993-94, seventeen Migrant Education Even Start (MEES) projects and more than a dozen tribal Even Start projects have been funded. Together, the state-administered and the set-aside projects provide services designed to meet the diverse needs of families across all areas of the nation.

MEES projects serve a highly mobile population including many families moving across states each year. MEES projects are located in urban (25 percent), rural (38 percent) and a combination of urban and rural (37 percent) areas. Some MEES projects coordinate Even Start services provided in multiple states. In addition to economic and educational limitations common to all Even Start families, many migratory parents and children are recent immigrants and are limited in English language proficiency. The MEES educational services need to account for a great diversity in language and cultural backgrounds of participants. One of the major challenges for MEES projects is to design and deliver meaningful educational services to families who may be in their programs for only a few months before moving. Some MEES projects are designed to follow the same families across states over time; others focus their efforts on families only while they are in their communities.

Eligible grantees for the tribal projects are federally-recognized Indian tribes and tribal organizations. Tribal Even Start projects also address special challenges. Their families tend to live in remote, rural areas, located far from the Even Start program sites. (In 1996-97, 70 percent of tribal projects were in rural communities; 30 percent served both urban and rural areas.) In these areas, families' access to educational and support services provided by other community organizations may be limited. For these reasons, some tribal projects rely chiefly on home-based educational services, taking on the challenges of serving families across large distances. While these circumstances may also be encountered by non-tribal, rural projects, incorporating materials and activities that are consistent with and promote the Native American heritage, so as to encourage participation and retention, is an important objective of many tribal Even Start projects.

In addition to the MEES and tribal projects, the law authorizes discretionary grants for: (1) statewide family literacy initiatives designed to coordinate existing federal, state, and local literacy resources in support of family literacy services and (2) a family literacy project in a prison that houses women and their preschool-aged children. These projects also are administered directly by the U.S. Department of Education.

---

[13] To receive migrant education services (under Title I, Part C), migrant agricultural families must have crossed school district lines within the last thirty-six months in pursuit of qualifying work in farm, dairy, fishing, timber, and related processing industries.

PROGRAM GROWTH: FIRST EIGHT YEARS

Even Start has grown steadily since it began in 1989-90 with seventy-six projects serving approximately 2,500 families. Eight years later, in 1996-97, approximately 34,400 families participated in 637 projects (Exhibit 1.1).

Exhibit 1.1: Number of Even Start Projects and Participating Families Since Program Inception

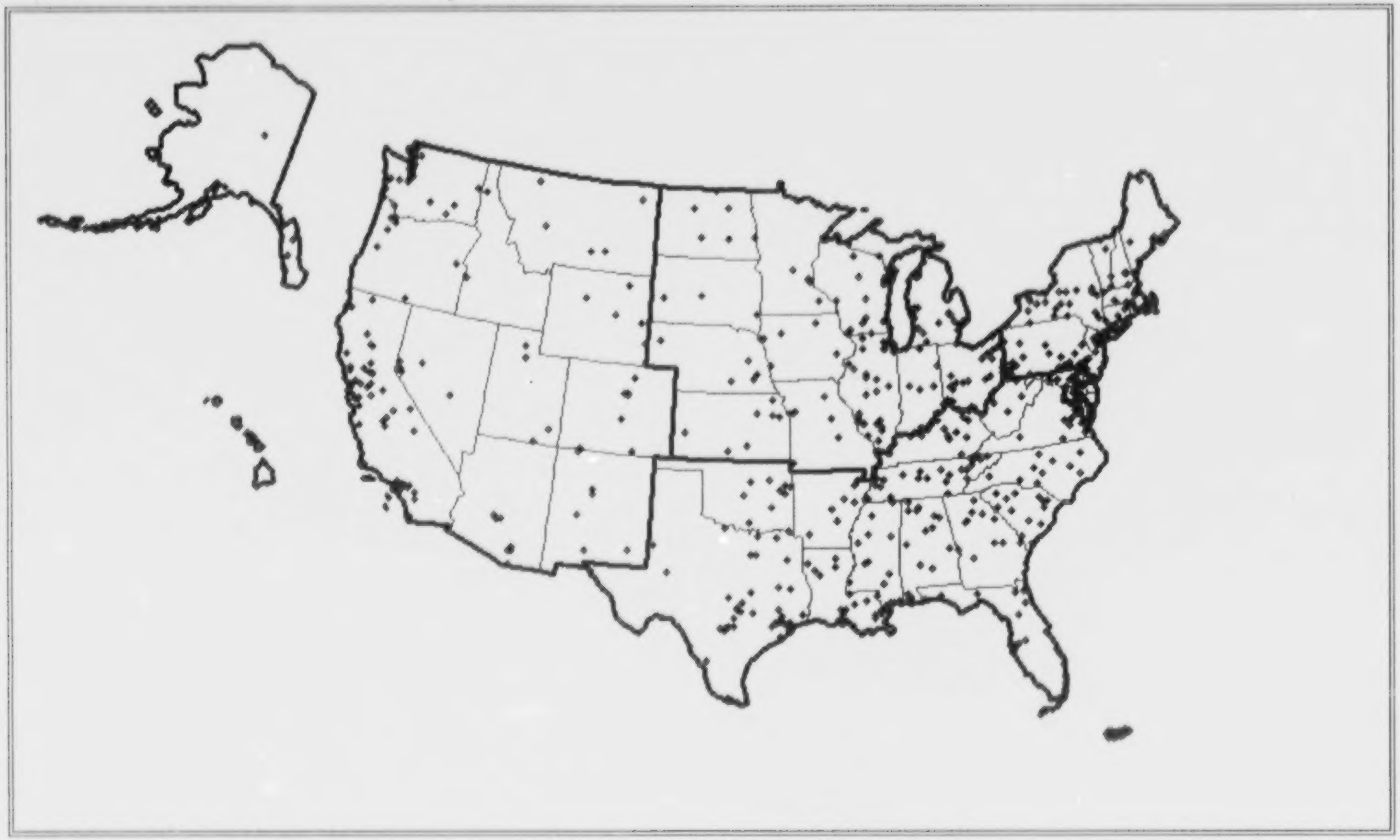
Program Year	Number of Projects Operating	Number of Participating Families
1989-90	76	2,450
1990-91	122	6,600
1991-92	239	14,900
1992-93	340	20,800*
1993-94	490	29,400*
1994-95	513	27,200
1995-96	576	31,500
1996-97	637	34,400

*Note: * In Program Year 1992-93, participant data were available from 270 of 340 projects operating. In Program Year 1993-94, no participant data were collected. The numbers of participating families for these program years are estimates based on an average of 60 families per project, the average that has remained stable through most program years.*

Exhibit reads:* *In 1996-97, 637 Even Start projects were in operation, serving approximately 34,400 families.

Throughout the duration of the second evaluation, Even Start projects were located in all fifty states, the District of Columbia, and Puerto Rico. A large percentage of projects (39 percent in 1996-97) was in the South, followed by approximately 20 percent each in the Midwest and the West, and 17 percent in the Northeast. (Exhibit 1.2 displays the locations of all Even Start projects in 1996-97, with bold lines delineating the Northeast, South, Midwest, and West regions.) The distribution of local projects relates, at least in part, to the relative proportions of low-income children within a given state. Even Start funding is based on each state's share of Title I LEA grants which are allocated primarily based on the number of school children from low-income families. The distribution of projects within each state must be representative of urban and rural areas in the state.

Exhibit 1.2: Locations of Even Start Projects in 1996-97



Note: In 1996-97, the Northeast region included 104 projects located in: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. The South region included 249 projects located in: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The Midwest region included 145 projects located in: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The West region included 139 projects located in: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

BEST COPY AVAILABLE

PRINCIPAL COMPONENTS OF THE EVEN START APPROACH

Under the 1994 reauthorization law, Congress requires all Even Start projects to implement ten key elements in their service delivery approach:

- Identifying and recruiting families most in need of Even Start services in the community. Indicators of need include low family income; parents' low level of literacy or lack of proficiency in English; and other need-related indicators such as homelessness, single-parent household, and family members with learning or developmental disabilities.
- Serving families most in need of Even Start services.
- Screening and preparing parents (including teen parents and their children) to participate fully in Even Start services and activities. Services include testing, referrals for necessary counseling, other developmental and support services, and related services.
- Designing services to accommodate participants' work schedules and other responsibilities. Those services include providing support services (when those services are not available from other sources) such as: scheduling and locating services to allow joint participation by parents and children; ensuring availability of child care for the period that parents are involved in the Even Start program; and ensuring availability of transportation to allow parents and children to participate in Even Start activities.
- Offering high-quality, intensive instructional programs to promote adult literacy and to empower parents to support the educational growth of their children; developmentally appropriate early childhood educational services; and preparation of children for success in school.
- Providing and monitoring integrated instructional services to parents and children through home-based programs.
- Providing services on a year-round basis including the provision of some program services, instructional or enrichment, during the summer months.
- Providing special staff training, including child care staff, to develop the skills necessary to work with parents and young children in the full range of Even Start instructional services.
- Coordinating with other programs including other Title I and Elementary and Secondary Education Act programs and relevant programs under the Adult Education Act, the Individuals with Disabilities Education Act, the Job Training Partnership Act, the Head Start program, volunteer literacy programs, and other relevant programs.
- Providing for an independent evaluation of the program.

The underlying premise of Even Start is that combining adult literacy or adult basic education, parenting education, and early childhood education into a unified family literacy program offers promise for helping to break the intergenerational cycle of poverty and low literacy in the nation. The Even Start program has three interrelated goals:

- To help parents improve their literacy or basic educational skills;
- To help parents become full partners in the education of their children; and
- To assist children in reaching their full potential as learners.

Exhibit 1.3 presents a conceptual model that describes the types of activities conducted by Even Start projects; input factors that are believed to influence the design and delivery of services; and the intended outcomes for participating parents and children. Even Start services provided to children and their parents can be grouped into two areas: (1) core educational services and (2) support services. The core services have three components, as specified in the reauthorization legislation:

- **Adult education and adult literacy:** high-quality instructional programs[14] for adults to promote adult literacy [including adult basic education (ABE), adult secondary education (ASE), English as a second language (ESL), and preparation for the General Education Development (GED) certificate or a high school diploma];
- **Parenting education:** high-quality instructional programs to empower parents to support the educational growth of their children; and
- **Early childhood education:** developmentally appropriate educational services for children designed to prepare them for success in regular school programs.

In addition to core services, Even Start projects typically provide a range of support services, when necessary, to enable families to participate in the Even Start program. Examples of support services are transportation, child care, health care, meals, nutrition assistance, mental health referrals, referrals for employment, advocacy assistance with governmental agencies, counseling, child protective services, referrals for screening or treatment for chemical dependency, referrals for services for battered women, special care for a disabled family member, and translators. The Even Start legislation requires that support services, like the core services, be obtained from existing providers whenever possible.

Even Start is intended to benefit families in several domains. While not every Even Start project will try to affect all of the outcomes listed in Exhibit 1.3, potential program outcomes for parents include positive changes in literacy behaviors (e.g., shared literacy events with children and increased reading and writing activities in the home); parenting behavior and skills (e.g., positive parent-child relationships and positive expectations for child); and educational and employment skills (e.g., improved reading and English language ability and higher educational attainment). Goals for Even Start parents also may include growth in personal skills and community involvement. The potential positive impact of Even Start on children includes improved language and cognitive development, emergent literacy, school readiness, and achievement. Once children enter school, outcomes might include satisfactory school performance, improved school attendance, and a lower incidence of special education and retention in grade.

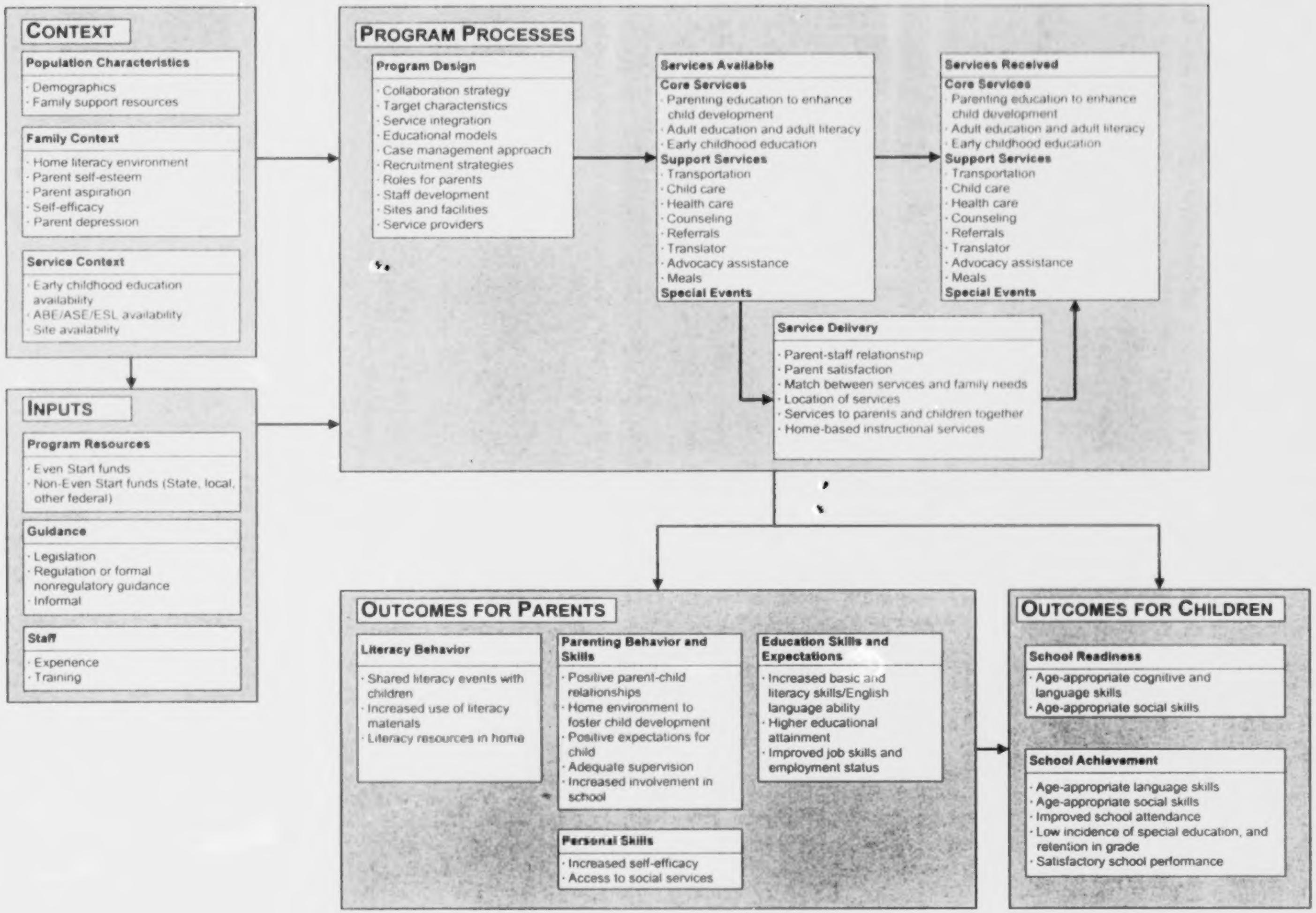
---

[14] In April 1996, the Even Start statute was amended to require high-quality, *intensive* instructional programs. This requirement became effective for projects in program year 1996-97.

While setting forth major elements required for all Even Start projects, the Even Start legislation allows grantees great flexibility in designing services to meet local needs. The model reflects the differentiation among local projects across many dimensions. These include:

- The characteristics of target children and adults;
- The collaboration strategy to coordinate service delivery with other agencies;
- The extent to which services for families are integrated (e.g., activities in parenting education reinforcing learning in adult education);
- The educational model and materials used for delivering adult basic and literacy education, parenting, and early childhood education services;
- Strategies for recruiting and retaining program participants;
- The role that parents play in the project; and
- Staff development activities.

Exhibit 1.3: Even Start Conceptual Model


CONTEXT
Population Characteristics
· Demographics
· Family support resources
Family Context
· Home literacy environment
· Parent self-esteem
· Parent aspiration
· Self-efficacy
· Parent depression
Service Context
· Early childhood education availability
· ABE/ASE/ESL availability
· Site availability
INPUTS
Program Resources
· Even Start funds
· Non-Even Start funds (State, local, other federal)
Guidance
· Legislation
· Regulation or formal nonregulatory guidance
· Informal
Staff
· Experience
· Training
PROGRAM PROCESSES
Program Design
· Collaboration strategy
· Target characteristics
· Service integration
· Educational models
· Case management approach
· Recruitment strategies
· Roles for parents
· Staff development
· Sites and facilities
· Service providers
Services Available
Core Services
· Parenting education to enhance child development
· Adult education and adult literacy
· Early childhood education
Support Services
· Transportation
· Child care
· Health care
· Counseling
· Referrals
· Translator
· Advocacy assistance
· Meals
Special Events
Services Received
Core Services
· Parenting education to enhance child development
· Adult education and adult literacy
· Early childhood education
Support Services
· Transportation
· Child care
· Health care
· Counseling
· Referrals
· Translator
· Advocacy assistance
· Meals
Special Events
Service Delivery
· Parent-staff relationship
· Parent satisfaction
· Match between services and family needs
· Location of services
· Services to parents and children together
· Home-based instructional services
OUTCOMES FOR PARENTS
Literacy Behavior
· Shared literacy events with children
· Increased use of literacy materials
· Literacy resources in home
Parenting Behavior and Skills
· Positive parent-child relationships
· Home environment to foster child development
· Positive expectations for child
· Adequate supervision
· Increased involvement in school
Education Skills and Expectations
· Increased basic and literacy skills/English language ability
· Higher educational attainment
· Improved job skills and employment status
Personal Skills
· Increased self-efficacy
· Access to social services
OUTCOMES FOR CHILDREN
School Readiness
· Age-appropriate cognitive and language skills
· Age-appropriate social skills
School Achievement
· Age-appropriate language skills
· Age-appropriate social skills
· Improved school attendance
· Low incidence of special education, and retention in grade
· Satisfactory school performance

BEST COPY AVAILABLE

VARIATIONS UPON THE BASIC MODEL

Although the Even Start legislation requires a number of key elements and features to be implemented in all local projects, decisions about *how* to implement each requirement are left up to the projects. Projects decide on the frequency and duration of program activities, whether the activities are primarily center-based or home-based, and whether to invent educational curricula from scratch or use a hybrid of existing approaches. Projects decide which program components will be provided using Even Start funds-and negotiate components to be supported by collaborating agencies.

The number and characteristics of program participants vary greatly across projects, depending on such factors as geographic location, economic and social characteristics of the local population, and the design of the project. On average, each Even Start project serves approximately sixty families each year. However, some large projects in highly populated urban areas enroll several hundred families, while small rural projects may serve twenty to thirty families per year.

Overall, Even Start families are very poor; most have annual incomes at or below the federal poverty level. A majority of parents enter Even Start lacking a few years of high school education (including schooling received outside the United States). However, about 40 percent have only primary school education. Many parents are not native English speakers and have very limited English language abilities.

Projects can decide to focus educational activities for children on a narrower age span than the full birth-through-7 range allowed by the legislation, as long as each project, at a minimum, targets children over a three-year age range. Since the Even Start program began, local projects have consistently offered services for preschool-age children. Services for infants and toddlers, initially offered less frequently, are now available in many more projects.

Most Even Start projects provide center-based early childhood programs, either directly or through collaboration with existing early childhood programs such as Head Start. These center-based programs usually incorporate elements of pre-existing curricula designed for young children. Even Start services to school-age children in Even Start often are provided in conjunction with their regular school activities. Such services may take the form of homework assistance given in before- and after-school child care programs and summer school activities.

Adult education services are provided in a variety of formats by different levels of personnel, ranging from volunteers to certified adult education teachers. Some projects offer adult education classes geared toward completing a GED, while others provide general instruction in basic skills such as reading, writing, and math. In some projects, adult education services are focused chiefly on an English as a second language curriculum. Projects working with adults who have very low-level basic skills may arrange individual tutoring through such programs as Literacy Volunteers of America (LVA) or provide other types of one-on-one instruction during home visits.

Parenting education is less frequently available through other sources than are adult and early childhood education services. Thus, many projects rely mostly on Even Start resources to deliver parenting education. These services may take the form of group discussions, hands-on activities, home visits, and presentations by invited speakers. Topics addressed in these activities include helping families make use of available community services, increasing parents' understanding of their role in their children's education, and training parents in child-behavior management.

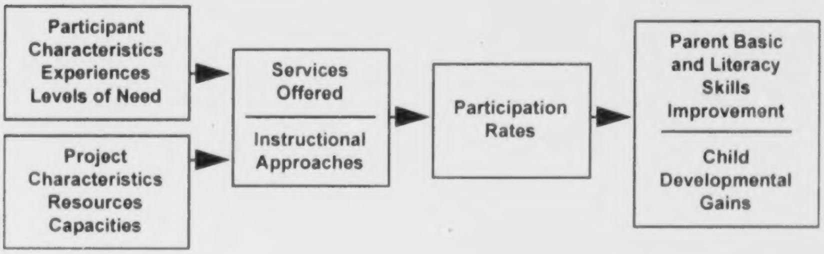
Educational activities often are offered in institutional settings (e.g., adult education classes in high schools and community colleges and preschool programs associated with community-based organizations or local educational agencies). In some projects, however, particularly those in sparsely populated rural areas, most services may be home-based, involving highly individualized instruction tailored to each family's needs.

Projects vary greatly in the amount of experience in operating the Even Start program. Some projects began with relevant prior experience in providing family educational services and have further refined and enhanced their services over four or more years of Even Start grants. In 1996-97, more than half of all projects had four years or longer of Even Start experience. On the other hand, in recent years, about 15 percent of projects each year have been new Even Start grantees. Commonly, new grantees spend a planning period of three to six months in program development before they begin enrolling families and even more time before all key program elements are fully implemented.

ORGANIZATION OF THE REPORT

This is the final report of the second Even Start national evaluation. The report incorporates findings from interim analyses of data collected annually during the last four years as well as key findings from the first national evaluation. The findings are organized according to a simplified schematic (shown in Exhibit 1.4) of the Even Start conceptual model introduced in Exhibit 1.3. Exhibit 1.4 represents the general assumptions and expectations implicit in the Even Start program goals: *Taking into account both the highly disadvantaged circumstances of participants and the level of resources available, higher intensity and quality of services provided to participants lead to greater and fuller participation and greater educational and developmental outcomes for participating families.*

Exhibit 1.4: Framework for Reporting the Even Start National Evaluation



Participant Characteristics Experiences Levels of Need
Project Characteristics Resources Capacities
Services Offered
Instructional Approaches
Participation Rates
Parent Basic and Literacy Skills Improvement
Child Developmental Gains

This general assumption or expectation guides the reporting of the national evaluation findings. Each chapter represents a building block to examine each component of the schema depicted above, all leading toward the examination of factors that contribute to higher participation rates (Chapter 6) and greater educational outcomes (Chapters 7 and 8).[15]

Following *Chapter 2: Even Start National Evaluation*, detailed descriptions of Even Start families, parents, and children are presented in *Chapter 3: What Are the Needs of Even Start Families?* The key issue addressed in Chapter 3 is: *How well is Even Start reaching the most needy families in their communities?* Participant characteristics discussed in Chapter 3 were included in the analyses of factors that are associated with families' participation rates and program outcomes.

Because Even Start projects have a wide latitude in *how* they implement their services, *Chapter 4: What Resources Support the Even Start Services?* examines the administrative contexts of Even Start projects, levels of funding, staffing patterns, and challenges to implementing Even Start services. Key issues discussed in this chapter were, in turn, used as measures of project characteristics when we examined factors that are related to families' participation rates.

Chapter 5: What Services Do Even Start Projects Provide to Participants? focuses on educational and support services Even Start projects offer to families. The guiding question for this chapter is: *Does Even Start offer services of sufficient quality, intensity, and flexibility, accompanied by a wide range of support services?* Various features of service delivery practices also were included in the analyses of participation rates.

Distinguishing between the services projects offer and the services in which families participate, *Chapter 6: To What Extent Did Even Start Families Participate in the Services Offered?* reports participation rates for parents and children in all components of the educational services. The guiding question for this chapter is: *Taking into account various participant characteristics and levels of program resources, what aspects of services contribute to greater participation, retention, and completion rates?*

---

[15] The schema in Exhibit 1.4 is intended as a visual guide in leading readers through this report; it is not a comprehensive representation of assumptions underlying the Even Start program.

Information presented in Chapters 3 through 6 converges on the issue of program outcomes to focus on the question: *How much progress was achieved by parents and children participating in Even Start? What participant characteristics and programmatic features have contributed to the observed program outcomes?*

Findings on participant progress over a two-year time period are presented in *Chapter 7: What Are the Educational and Developmental Outcomes of Even Start Participants? Chapter 8: Do Program Outcomes Vary Depending on Project and Participant Characteristics?* expands on the preliminary findings reported in the 1995 and 1996 interim reports concerning the potential influence of various project characteristics and service delivery practices on participants' educational progress.

Finally, *Chapter 9: Conclusions* returns to the key research questions that have guided the second national evaluation. What have we learned from the past eight years of evaluation? What do the findings tell us about the development of the Even Start program? About its participants? What are the areas for future evaluation activities to continue to build the knowledge base about Even Start and family literacy programs in general?

CHAPTER 2: EVEN START NATIONAL EVALUATION

Section 1209 of the reauthorized Even Start legislation requires an independent evaluation of the projects funded under Even Start to:

1) determine the performance and effectiveness of programs ... and
2) identify effective Even Start programs ... that can be duplicated and used in providing technical assistance to Federal, State, and local programs.

In addition, each Even Start project is required to conduct an independent local evaluation.

THE FIRST EVEN START NATIONAL EVALUATION

In January 1990, the U.S. Department of Education awarded the first contract for a national evaluation of Even Start. The evaluation, completed in April 1994, was based on the National Evaluation Information System (NEIS), which compiled data from all Even Start projects, and an In-Depth Study (IDS) of ten projects.

The NEIS was designed to collect a common set of data from each Even Start project and Even Start participants. The NEIS provided annual descriptive information about Even Start, including types of projects funded, services offered, collaborative efforts undertaken, and obstacles to program implementation. It also provided detailed information describing the families participating in Even Start, the services they received, and the progress they made in areas such as adult basic skills, children's school readiness, and parent-child interactions.

The second component of the first evaluation, the In-Depth Study, was designed to complement the broad-based NEIS data collected from all Even Start projects with detailed information from a subset of ten purposely selected grantees. The IDS focused on the short-term outcomes of Even Start on adults and children. Five of the ten projects implemented a design where families were randomly assigned to Even Start or a control group. Major findings from the first evaluation were summarized in the final report published in 1995 (St.Pierre et al., 1995).

The first national Even Start evaluation documented the nature of program services and the types of families served by the program. From 1989 to 1992, federal funding for Even Start increased from $14.5 million to $70 million, and the program grew from seventy-six projects serving 2,500 families to 340 projects serving approximately 20,800 families. The program achieved its goal of working with families most in need of Even Start services—66 percent of families had annual incomes under $10,000; 79 percent of adults had not completed high school when they entered the program; and 34 percent spoke languages other than English at home. Though there was great project-to-project variation in most aspects of Even Start, virtually all Even Start projects were able to design and offer the three required core instructional services of adult education, parenting education, and early childhood education. They also offered instructional services in a home-based setting, services to parents and children together, and appropriate support services that enabled families to participate fully in Even Start's core services.

Outcomes for children followed a pattern seen in other studies of preschool programs: early positive effects on cognitive development that diminish over time once control group children start to receive school-based services. Similarly, the pattern of outcomes for adults was consistent with what has been learned from studies of other adult education/social service programs: Even Start projects were able to increase rates of GED attainment but with no commensurate increase in functional literacy. While acquiring a GED may be an important stepping stone to future education or employment, it is discouraging that literacy skills did not appear to improve at the same time. Finally, Even Start families that were intensively engaged in core services did better than families with lower levels of participation.

DESIGN OF THE SECOND EVEN START NATIONAL EVALUATION

In March 1994, the U.S. Department of Education awarded the second national evaluation contract, which consisted of four related but distinct components:

- The Even Start Information System (ESIS) to collect data from all projects;
- The Sample Study to collect outcome data from fifty-seven selected projects;
- Site visits to Migrant Education Even Start (MEES) projects; and
- Site visits to Even Start projects for Indian tribes and tribal organizations.

This four-year study continued to monitor the implementation and effectiveness of the Even Start program through analyses of the same critical issues examined in the first evaluation. In addition to the national Even Start evaluation, other studies of Even Start funded by the U.S. Department of Education and other organizations are examining various specific issues affecting the Even Start program. In addition, all local Even Start projects arrange for evaluations of their projects by independent evaluators.

The components of the second national evaluation are summarized in Exhibit 2.1.

Exhibit 2.1: Components of the Even Start Evaluation

Evaluation Components	Target Population	Types of Data Collected	Data Collection Procedures and Years	Basic Research Questions
Second National Evaluation Activities				
Universe Study	All Even Start projects and participants	Participant characteristics, services, implementation, costs, participation outcomes	Parent interview, project questionnaire 1994-1997	Who is served by the program and what services do they receive? Is the program reaching the appropriate target population? How well was the federal funding on the program spent? How many of the programs were well implemented?
Sample Study	Even Start participants in 57 selected Even Start projects	Outcomes: school readiness, adult literacy skills, home environment, program participation	Child and adult tests (PSI, PLS-3, TABE, CASAS), HOME Screening Questionnaire, family contact logs 1995-1997	How well does the basic Even Start model work? Do participants perform better on key measures than similar persons who do not participate? What are effective practices and programs?
Case studies of Migrant Education Even Start projects	Three Migrant Education Even Start projects	Special issues regarding program implementation, effective practices, applicability of the ESIS	Staff interview, observations of educational activities 1994	What issues are special to implementing Even Start programs for migrant families? What are promising practices? How well does the ESIS capture the unique features of these projects?
Case studies of tribal Even Start projects	Three tribal Even Start projects	Special issues regarding program implementation, effective practices, applicability of the ESIS	Staff interview, observations of educational activities 1995	What issues are special to implementing tribal Even Start programs? What are promising practices? How well does the ESIS capture the unique features of these projects?
Additional Evaluation Activities				
Focused studies sponsored by the federal government and other organizations	Projects selected using various criteria depending on the focus of the study	Focused assessment of specific program implementation and effectiveness issues	Many evaluation approaches used	Different research questions are addressed in each project
Local evaluation	Conducted at local level	Additional information desired by local administrators	Proposed in project application All years of grant	How does the project meet specified local needs?

BEST COPY AVAILABLE

RESEARCH QUESTIONS

The second national evaluation addressed four major questions listed below, each associated with a set of more specific sub-questions.

1. Who is served by the program? What services do they receive? Is the program reaching the appropriate target population?

- What are the characteristics of family units participating in Even Start?
- What are the background characteristics of adults who participate in Even Start (e.g., gender, age, race/ethnicity, employment status, annual income, primary language)?
- What is the educational history of adults who participate in Even Start? What percentage of adults enter with a high school diploma or a GED and what are their characteristics?
- What are the background characteristics of children who participate in Even Start (e.g., gender, age, race/ethnicity, special needs)?
- What are the program participation histories of children who participate in Even Start?
- How do the characteristics of Even Start adults compare with the characteristics of participants in adult education programs nationally?
- How do the characteristics of Even Start children compare with the characteristics of participants in Title I and Head Start programs?
- How do background and literacy characteristics of adults and children vary across projects? Is it possible to identify sets of projects that appear to be using different targeting criteria? Do some projects appear to target "high need" populations while others target "low need" populations?
- How many families participate in Even Start? In each of Even Start's three core services? In all core services?
- How long do families participate in Even Start on a program-year basis (how many months are services received)?

2. How is the federal funding spent on the program? How many of the projects are well implemented?

- What is the geographic and urban/rural distribution of Even Start projects?
- What is the federal cost for Even Start projects? What services are purchased with Even Start funds?
- How are families recruited into Even Start? How do projects target recruitment efforts?

- What local evaluation activities are being undertaken by Even Start projects?
- What is the nature of services in early childhood education, adult education, and parenting education offered by the projects? What activities do the projects offer for parents and children together? What is the nature of home visits offered by the projects? What types of support services are provided to participants?
- What types of collaborations exist between Even Start and other agencies? What types of agencies are collaborators?
- What is the training and experience of staff who provide Even Start services?
- How long do Even Start families stay in the program?
- What barriers exist to successful program implementation?
- Are the differences in program implementation associated with such factors as project cohort, length of time the project has had a grant, and area of the country?

3. How well does the Even Start basic model work? Do participants perform better on key measures than similar persons who do not participate?

- What gains are observed for Even Start children on measures of school readiness and vocabulary?
- What gains are observed for Even Start adults on measures of functional literacy, GED attainment, employment status, annual income, parent expectations, and parenting skills?
- With what degree of confidence can observed gains be attributed to participation in Even Start?

4. What are effective practices and programs?

- What participant characteristics (e.g., educational level of adults at entry, age of parent, size of family) are associated with program outcomes?
- What project characteristics (e.g., urban/rural location, degree of implementation, year-round versus school-year operation schedule, high federal cost per family versus low federal cost per family) are associated with program outcomes?
- What staff characteristics are associated with program outcomes?
- What service characteristics (e.g., amount of core service received, percentage of core services delivered at home versus in a center, percentage of core services delivered to parents and children together) are associated with program outcomes?

- Is it possible to define subgroups of families based on need criteria (e.g., income, entry education level), and determine whether outcomes vary across the subgroups?

While the above list includes all research questions articulated at the initiation of the current evaluation, some questions necessitated accumulating data over time. Thus, the 1993-94 Interim Report largely was restricted to descriptions of the projects and how they implemented the Even Start model. The 1994-95 report updated the descriptions of Even Start participants and their participation outcomes for the first time since program year 1992-93. The 1995-96 report added an examination of project characteristics with reference to the number of years the projects had operated Even Start.

THE EVEN START INFORMATION SYSTEM (ESIS)

The ESIS was a modification of the NEIS used in the first evaluation. Like the NEIS, the ESIS was used to collect a common set of data from all Even Start projects to generate ongoing information about such issues as: types of projects being funded; nature and intensity of services offered; interagency collaboration; major difficulties in program implementation; participating families; and families' participation outcomes. Each Even Start grantee was responsible for completing four ESIS forms.[16]

Combined across all projects, the ESIS data were used to describe the Even Start program as a whole. The data also were used to categorize projects into different subgroups for further analysis. For instance, this report includes descriptions of service delivery and participation outcomes for projects grouped by their years of experience in operating Even Start and percentages of teen parents they serve.

SAMPLE STUDY

Information about program outcomes for children and parents, as well as detailed participation data, was submitted to the evaluation contractor by a sample of fifty-seven projects. The Sample Study projects were selected systematically to represent urban and rural areas in all regions of the country. These projects were initially funded in 1992 or 1993. By the 1996-97 program year, some of these projects were in their fourth or fifth year of operation; a few projects had completed their grants and were no longer funded.

---

[16] Copies of the ESIS data collection forms are available from the U.S. Department of Education, Planning and Evaluation Service, 400 Maryland Avenue, S.W., Room 6W314, Washington, D.C. 20202.

In addition to the same project-level and participant-level data that all the Even Start projects submitted each program year, the Sample Study projects agreed to collect more comprehensive data on participants for up to three years.[17] These projects were asked to administer assessment measures to monitor the impacts of the Even Start educational services on participating parents and children. During the instrument selection process, instruments were chosen that addressed the following criteria: ease of administration for project staff; minimal burden for project participants; and appropriateness of the measure for assessing the three core areas of Even Start services (e.g., English language literacy skills of adults, the educational environment provided by parents for their children; and the effect of early childhood education on school readiness and language development for children).

The outcome measures for each of these areas is discussed further below. The specific outcomes for children participating in Even Start included the following assessments:

- The Preschool Inventory (PSI) for school readiness skills; and
- The Preschool Language Scale-3 (PLS-3) to measure language development.

To examine the outcomes of adult education, projects in the Sample Study had the choice of administering one of two tests to each participating adult:

- The Comprehensive Adult Student Assessment System (CASAS), an adult-oriented functional assessment system that measures a broad range of adult literacy skills and their application in real life domains; or
- The Tests of Adult Basic Education (TABE) Reading and Mathematics subtests for participants in GED preparation programs and some adult secondary education programs.

To assess the outcomes of parenting education, the Sample Study projects used:

- The Home Observation for Measurement of the Environment (HOME) Screening Questionnaire.

To obtain a true baseline measure of adult and child skills prior to participation in the program, only families new to Even Start were included in the Sample Study. In addition, only families in which at least one adult and one child spoke either Spanish or English were to be tested because the measures are available in only these two languages.[18]

---

[17] This approach of collecting broad-based data from all of the local projects and more comprehensive information on educational and performance outcomes from a much smaller number of projects minimized the burden of data collection for this evaluation and allowed for data collection over a time period that easily encompassed the tenure of most families' participation in the Even Start program.

Multiple parents and children from the same family could be included in the Sample Study. Unlike the first evaluation, where projects were instructed to select a target adult and child for testing, projects in the Sample Study were told to include parents who were eligible for and expected to participate in Even Start core services. Also to be tested were all children in a family who were between 2 and 5 years of age at program entry and who would be participating in early childhood education provided by Even Start or a collaborating agency.

The Sample Study projects were selected in the spring-summer of 1994 and received training on the Sample Study measures and procedures in August and September 1994. Pretest measures were administered to parents and children within thirty days of the start of program services for families who entered during that program year, and the posttest was administered at the end of the program year (1994-95), or when the family was planning to exit the program (whichever came first, as long as it was at least three months after the pretest). Families who continued into the next program year (1995-96) were posttested again in the spring of 1996. Families who enrolled in 1995-96 were pretested in the fall of 1995, posttested in the spring of 1996 (or at exit), and posttested again the following spring. Generally, there were between six and seven months between pretest and posttest.

SITE VISITS TO MIGRANT EDUCATION EVEN START PROJECTS AND TRIBAL EVEN START PROJECTS

The second national evaluation included site visits to three of the fourteen Migrant Education projects and three of the nine tribal Even Start projects operating in 1994-95. The visits focused on the special features of these Even Start projects (e.g., accommodating the seasonal participation schedules of migrant agricultural families; the geographical remoteness of tribal family homes and social/cultural factors that may influence the educational and parenting experiences of families in these set-aside funded projects). The site visits also provided an opportunity to assess the appropriateness of the ESIS for collecting data from these sites. Information gathered from the two sets of site visits has been summarized in two reports.

---

[18] Although the child outcome measures, the Preschool Inventory and the Preschool Language Scale, were administered in English and Spanish, the outcome measures for adults were administered only in English. The decision to use assessment instruments that measure adults' progress in English language skills reflects the programmatic goals of developing English language proficiency. Over the past several years, however, the proportion of the Limited English Proficient (LEP) participant population has increased, which means that the outcome measures were not equally available for all Sample Study participants, and further, that inferences about the program are applicable only to those participants for whom we have outcome data.

SCOPE OF THE SECOND NATIONAL EVALUATION

UNIVERSE STUDY

The scope of the Universe Study grew substantially during the four years of the second evaluation. The number of projects participating in the evaluation increased from 439 to 605 (Exhibit 2.2); the number of families included in the data analysis increased from 25,200 in 1994-95 to 31,200 in 1996-97.[19] The tribal and MEES projects were represented in each annual data collection. While recognizing that these set-aside projects may have unique characteristics that distinguish them from other projects, in order to describe the full range of Even Start projects, we have included participant and project data from the set-aside projects in the analyses described in this final report.[20]

In 1996-97, there were 637 Even Start projects nationwide. Of these, 95 percent (605 projects) returned at least some evaluation data by the final due date. (The distribution by state of projects that reported data for the 1996-97 evaluation is presented in Appendix B, Exhibit B.1.) Thirty-two projects that did not submit data were distributed across seventeen states in all regions. The exclusion of these projects from analyses should not bias the national program description. Similarly, in all years of the second evaluation, the analysis database included 90 to 98 percent of the projects operating in each respective year. Thus, the evaluation results presented in this report essentially represent the entire Even Start program.

---

[19] The numbers of families included in the evaluation data analyses were lower than the *estimated* numbers of participants across *all projects* reported in Exhibit 1.1 due to approximately 2-7 percent of projects not submitting data each year. No participant-level data were collected in 1993-94.

[20] Descriptive information obtained from the MEES and tribal project case studies were summarized in two separate case study reports. ESIS data collected from MEES and tribal projects for the Universe Study have been analyzed separately and released in a set of special analysis reports. In addition, each MEES and tribal project received an Individual Project Profile Report which provided feedback to the project on key evaluation measures in comparison with all other MEES, or tribal, projects.

Exhibit 2.2: **Number of Projects Included in the Even Start National Evaluation: Program Years 1993-97**

Program Year and Type of Project	Number (Percent) of Projects Reporting	Total Number of Projects Operating
1993-94 Total	**439 (90%)**	**490**
State-administered Even Start Projects	420 (92%)	459
Migrant Education Even Start Projects	10 (45%)	22
Tribal Even Start Projects	9 (100%)	9
1994-95 Total	**476 (93%)**	**513**
State-administered Even Start Projects	458 (93%)	490
Migrant Education Even Start Projects	11 (79%)	14
Tribal Even Start Projects	7 (78%)	9
1995-96 Total	**563 (98%)**	**576**
State-administered Even Start Projects	546 (98%)	558
Migrant Education Even Start Projects	9 (100%)	9
Tribal Even Start Projects	8 (89%)	9
1996-97 Total	**605 (95%)**	**637**
State-administered Even Start Projects	578 (95%)	608
Migrant Education Even Start Projects	17 (94%)	18
Tribal Even Start Projects	10 (91%)	11

Note: The numbers of state-administered, Migrant Education, and tribal projects reported for 1993-94 may be somewhat inflated since there was some confusion regarding the definition of an "Even Start project" in the first year of the second evaluation. For example, programs located across several states but supported by a single Migrant Education Even Start grant may have been reported as separate projects. Since the 1994-95 evaluation year, the definitional problem was clarified by strictly equating each federally-administered grant and state-administered subgrant as a project, regardless of the number of program sites.

Exhibit reads:* *For the 1996-97 national evaluation, 578 state-administered Even Start projects submitted data, representing 95 percent of the 608 state-administered projects operating in 1996-97.

The evaluation findings reported in Chapters 3 through 6 are based upon data representing virtually all Even Start projects and participants—the universe of the Even Start program. The 1996-97 data analysis results provide a framework for presenting relevant, comparative information reported in previous Even Start national evaluation reports to discuss the consistencies and changes in the program implementation and participants.

For the Universe Study, descriptive statistical analyses (including cross tabulations, means, standard deviations, and univariate and multivariate analyses of variance) were used to compute (1) the numbers and percentages of projects and participants who provided specific categories of responses, and (2) averages and ranges of information such as the number of instructional hours for either all or various subgroups of respondents.

To examine participant and project characteristics that are related to participation patterns, two types of analyses were performed: (1) multiple regression analyses to identify participant and project measures that were related to various participation measures *holding other factors constant (i.e.,* *statistically excluding the effects of other factors),* and (2) analysis of variance to examine further the relatively stronger relationships revealed in the regressions.

Since the statistical analyses reported in Chapters 3 through 6 were based on the universe of the Even Start program and large numbers of records, even a relatively small difference or change in percentages was statistically significant. The selection of results described throughout this report is based upon more than statistical significance alone. We discuss differences that are numerically large (e.g., 50 percent versus 80 percent) and results that appear to have practical and/or programmatic implications.

The importance of specific findings depends on the interests of stakeholders as well as statistical rules. For example, a 5-percentage-point increase in the percentage of families participating in all core services would have accounted for roughly 1,600 more families receiving full Even Start services nationally in 1996-97. This rate of increase for a typical local project with sixty families would have affected two or three families. Thus, the practical implication of this finding may be different for federal policymakers, local service providers, and the individual participants who contributed to the increase.

SAMPLE STUDY

Over the course of the Sample Study, we have received data from up to fifty-seven projects, although in 1996-97, only forty-seven projects submitted valid outcome data. While this represents a decrease from the number of projects that submitted outcome data in 1995-96, it reflects the fact that some projects were not refunded and that some projects had fulfilled their obligations to the Sample Study.[21] Exhibit 2.3 shows the number of parents and children with valid test data from the Sample Study. Individuals with out-of-range scores or missing data were excluded from these counts. In addition, posttests that were administered less than three months after pretests for the Preschool Inventory and less than two months after all other pretests were not included in the analyses because two months was deemed the minimum amount of potential instructional exposure an individual would have to have experienced in order to demonstrate any meaningful progress on outcome measures.

---

[21] These numbers include all projects that submitted any data as part of the Sample Study. As a result, the analyses described in Chapters 7 and 8 are based upon data from between forty-seven and fifty-three Sample Study projects.

Exhibit 2.3: Number of Parents and Children in the Sample Study at Pretest and Posttest (1994-95, 1995-96, and 1996-97)

Measure	Number with Pretest	Number with Pretest & Posttest 1	Number with Pretest, Posttest 1, and Posttest 2*
CASAS reading	246	117	32
CASAS math	215	115	24
TABE reading	685	286	18
TABE math	661	265	17
PSI	1,020	662	171
PLS-3 Auditory	1,023	712	188
PLS-3 Expressive	1,019	714	187
PLS-3 Total	1,016	712	187
HOME Screening Questionnaire	1,086	515	185

*Note: * This includes a small number of people for whom there were more than two posttest scores.*

Exhibit reads: 246 parents were pretested on the CASAS reading test; 117 parents were tested at both pretest and posttest on the CASAS reading test, and 32 were tested at the second posttest as well.

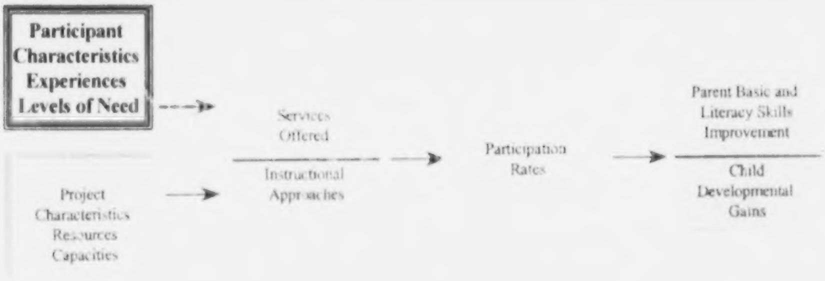
The number of children with valid PSI and PLS-3 pretest scores was approximately 1,100. There were fewer parents than there were children in the Sample Study (approximately 250 with pretests for the CASAS and 675 with pretests for TABE). The number of adults was lower for two reasons: (1) the TABE and CASAS were administered in English only; and (2) there were more likely to be multiple children but only one parent tested per family. These parents and children together represented 282 families with at least one test score at pretest and posttest for both adults and children.

The number of parents and children in the Sample Study was lower than expected. This is due to the following enrollment and participation patterns. Many projects were in their second or third year of operation when the Sample Study began, and they did not enroll many new families in the fall of 1994 but continued to serve families who had joined in previous years. Therefore, to augment the number of families with test data, we asked projects in the Sample Study to include those new families who enrolled in Even Start for the first time during the 1995-96 program year. It is clear that larger numbers of families enroll in Even Start than the number of pretest and posttest scores would indicate. (In other words, far fewer families have scores for the pretest and one or two posttests than have scores for the pretest alone.)

The number of adults with data from both the pretest and one posttest (who can be part of an analysis of change or gain) dropped by nearly half of the original number at pretest; for children, the reduction in sample size was less dramatic. We want to emphasize that the number of test points serves as a rough proxy for participation in the program; families who participated in Even Start for longer periods of time were more likely to have participated in additional rounds of testing. The families with only pretest data differ somewhat from those with pretest and posttest data on demographic variables such as family income, employment status, and language spoken in the home. Families with both pretest and posttest data—in other words, families who have participated for longer—on average, were more likely to be employed, to have higher incomes, and to speak languages other than English at home. Significantly fewer families with pretest and posttest data were headed by a single parent (41 percent) than families with only pretest data (50 percent) ($\chi 2=19.59$, $p<.002$). In addition, mothers' education among the group with pretest and posttest data was almost a grade-level higher than among the pretest only group (9.2 years versus 8.6 years).

We hypothesized in earlier reports that the group with both pretest and posttest data may have more supports within the family because there is a spouse or partner to share responsibilities. This hypothesis continued to be supported by data collected from exit interviews. There were also modest differences in reasons for exiting the program between families with pretest only and families with both pretest and posttest data. Families with both pretest and posttest data were more likely to leave because they had completed their goals (22 percent, contrasted to 18 percent for families with only pretest data, $p<.01$). Further, families with pretest only test data were also more likely to leave for such reasons as lack of interest, poor participation, or other problems (29 percent, compared to 23 percent for families with additional test information, $p<.01$). The group of families with both pretest and posttest data (again, the families who have remained in the program for longer) may not be representative of all families in Even Start. Because of these differences, we believe the Sample Study data may not reflect the experiences of other Even Start families. This key caveat should be kept in mind when interpreting the program effects presented in Chapters 7 and 8 of this report.

CHAPTER 3: WHAT ARE THE NEEDS OF EVEN START FAMILIES?


Participant Characteristics Experiences Levels of Need
Services Offered
Instructional Approaches
Participation Rates
Parent Basic and Literacy Skills Improvement
Child Developmental Gains
Project Characteristics Resources Capacities

This chapter addresses the question: *Is Even Start, which is designed to combat the intergenerational cycle of poverty and low literacy, serving families who are most in need of family educational services?* The evaluation data have consistently shown high levels of economic and educational needs across Even Start participants throughout the program's history. Many characteristics of Even Start families have remained relatively stable, although some aspects of participant profiles have changed. The percentage of Hispanic families has increased gradually since the first evaluation. The 1994 reauthorization of Even Start extended program eligibility to teen parents who had been ineligible for services under the Adult Education Act because they were under age 16 or because they were enrolled in school. This change became effective in program year 1995-96 and explains a gradual rise in the percentage of teen parents in Even Start since that program year.

Welfare reform is another factor that may affect Even Start participant profiles. The new five-year lifetime limitation on receipt of assistance, coupled with the necessity to obtain employment to receive benefits, may increase the need among low-income families for educational and job training services aimed at achieving economic self-sufficiency. Conversely, welfare reform could potentially have the opposite effect on Even Start families; the emphasis on quick job training and employment may interfere with efforts toward longer-term educational and family literacy goals. Overall, these developments are likely to create new challenges for Even Start services.

This chapter begins by presenting the basic demographic characteristics of families including family income and parents' employment status. (Low family income and low levels of adult literacy or English language proficiency are statutory requirements for selecting the "most in need" families to participate in Even Start.) The second section of the chapter describes other family characteristics that reflect the extent of families' need for Even Start educational and support services. These characteristics include parents' and children's educational backgrounds, parents' English proficiency, and parents' primary reasons for enrolling in Even Start.

BEST COPY AVAILABLE

Before discussing participant characteristics, however, we note that imprecise wording of some questions in the evaluation instrument introduced some ambiguity into the analysis findings. Most notably, the terms *family*, *household*, and *participating adult* were not clearly distinguishable. These terms were used inconsistently in several related questions (e.g., amount and main source of income for a *family*; number of people who live in a *household*; structure of a *family*; and receipt of welfare by a *participating adult*). These questions made it difficult to assess precisely the economic status of a *family unit* participating in Even Start because the economic unit may include more people living in the *household* (e.g., parents of teen parent) and the respondent may have reported only the income of the *participating family*. Thus, the *family* income reported may underestimate the *household* income for some Even Start families.

We also note that participant characteristics data were collected only on participating parents and children.[22] Descriptions of Even Start *families'* need for services are based on the characteristics of participating parents and children. Seven percent of families reported in the 1996-97 evaluation had more than one participating parent. To the extent that a participating parent may have greater needs for Even Start services than the non-participating parent in the same family (e.g., the former is a recent immigrant with limited English ability but the latter is proficient in English), the findings reported in this chapter would overestimate the extent of the families' needs. This caveat applies to the findings involving parents' educational background, English proficiency, and income-earning capabilities.

HOW MANY FAMILIES WERE SERVED IN EVEN START?

The number of families served in Even Start has grown from the first cohort of 2,450 in 1989-90 to 28,500 in 1994-95 to 34,400 in 1996-97 (Exhibit 1.1). In the 1996-97 program year, approximately 35,800 parents and 48,300 children participated in Even Start across 637 projects (Exhibit 3.1).

---

[22] To maximize the amount of information collected on program participants, while containing the data collection burden on Even Start project staff, demographic data were collected only for parents and children enrolled in the Even Start program.

Exhibit 3.1: 1996-97 Even Start Participants (Estimated for All 637 Projects Operating in 1996-97)

	Total 96-97 Participants	New Enrollees (Percent of Total)	Continuing from 95-96 (Percent of Total)
Families	34,400	20,800 (60%)	13,600 (40%)
Parents	35,800	22,700 (63%)	13,100 (37%)
Children	48,300	31,400 (65%)	16,900 (35%)

Note: The numbers in this exhibit are estimates based on family, parent, and child participation records submitted by 605 projects for the 1996-97 program year. However, based on the number of families the 605 projects reported serving in 1996-97, the estimated number of families served by 637 projects would be 35,545. Thus, the numbers in Exhibit 3.1 based on actual participation records are conservative estimates of the program population.

Subtracting new 1996-97 participants from all participants resulted in fewer numbers of continuing parents than continuing families. This counter-intuitive result is based upon the fact that no parent participation data were submitted for a small percentage of families that continued from the previous year, even though children in these families participated.

Exhibit reads:** **In 1996-97, an estimated 34,400 families participated across all 637 projects, of which 20,800 (or 60 percent) were new families, and 13,600 were continuing families from 1995-96.

Repeating the pattern from previous years, in 1996-97, more than 60 percent of parents and children were new enrollees in Even Start; fewer than 40 percent of 1996-97 participants were continuing from the previous year.[23] Given that the majority of participants were new enrollees (at least in the last two years of the second evaluation) and given that demographic shifts were also observed during this period, the discussion of participant characteristics will highlight characteristics of new families that enrolled in 1995-96 and 1996-97 ("new enrollees") compared to all participants in 1994-95 through 1996-97.[24]

WHAT WERE THE DEMOGRAPHIC CHARACTERISTICS OF EVEN START FAMILIES?

While many characteristics of Even Start participants have remained consistent since the program's inception, some of the major changes that have taken place involved participant demographics. The proportions of language-minority families as well as families headed by teen parents have increased substantially. These and other changes in participant characteristics have direct implications for Even Start program designs and service delivery.

---

[23] Further discussion of retention patterns over time is presented in Chapter 6.

[24] Family characteristics were collected only once for each family at the time of their enrollment in Even Start. Some participant characteristics are immutable (e.g., gender, birth date, race/ethnicity, relationship to participating child). However, for continuing families, some of the information (e.g., family income, parent educational level) may have changed since initial enrollment.

AGE AND GENDER OF PARTICIPATING PARENTS[25] AND CHILDREN

In 1995-96 and 1996-97, adult participants were somewhat younger (28 years average) than those in 1994-95 (29 years average). As shown in Exhibit 3.2, teen parents constituted 9 percent of Even Start parents in 1994-95, but they increased to 11 percent and 13 percent in the subsequent two years.[26, 27] The increasing enrollment of teen parents was even more visible among the new families each year. Teen parents constituted 15 percent and 17 percent of new enrollees in 1995-96 and 1996-97, respectively.

---

[25] The Even Start legislation specifies adult participants as *parents* who are eligible to receive adult education under the Adult Education Act or who are within the state's compulsory school attendance age range. If other caregivers serve as the parents of participating children, they are considered the children's parents within the context of Even Start.

[26] The 1996-97 evaluation findings are presented in comparison with findings from the previous program years. Because the 1994-95 evaluation did not collect data on the year of enrollment for each family, we could not distinguish the *1994-95 new enrollees* and *1994-95 continuing participants*. Thus, most of these comparisons involve data for *new participants who enrolled in 1995-96 and 1996-97* and data for *all program participants in 1994-95* to present possible changes in participant characteristics. The exhibit titles and the narrative text indicate the participant groups being compared. Exhibit titles with one program year in parentheses [e.g., (1996-97)] indicate that the data refer to *all* participants in the year indicated.

Comparisons with findings from the first evaluation are based on data reported in the final report of that evaluation (St.Pierre et al., 1995). Although similar data on family characteristics were collected in both evaluations, changes in the data collection instruments and analytic methods prevented us from making precise comparisons for some issues.

[27] Many of the exhibits presented in this report contain percentages that total to 99 or 101 percent due to rounding. Percentages referring to the total Even Start population may differ from the sum of percentages for subgroups due to rounding and/or greater prevalence of missing data in analyses involving various grouping variables (e.g., age and ethnicity of parents).

Exhibit 3.2: Percent of Parents, by Age: 1994-95, 1995-96, and 1996-97 Participants

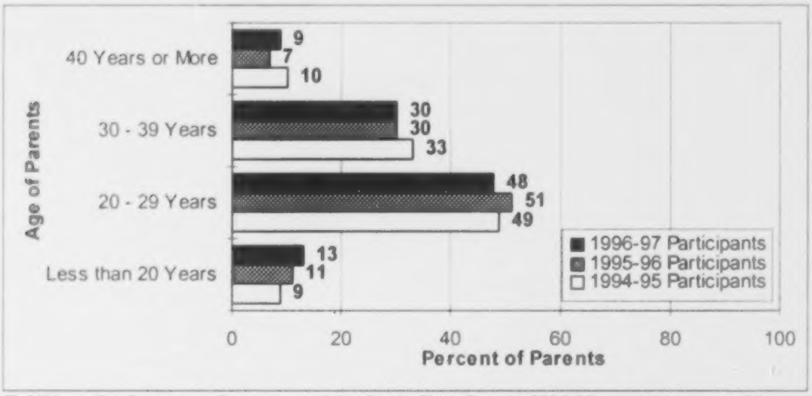


Exhibit reads: 9 percent of parents participating in Even Start in 1996-97 were 40 years or older.

This demographic trend poses new challenges for service delivery. For example, because many of the teen parents may be within the compulsory high-school attendance age, this demographic change may necessitate greater collaboration with high schools and strengthening services for infants and toddlers. Information about teen parents will be highlighted in subsequent chapters that focus on Even Start services and families' participation outcomes.

Throughout the history of Even Start, a large majority (approximately 85 percent) of adult Even Start participants have been women, primarily the mothers of participating children.

Any child from birth through age 7 is eligible to receive the core services of the Even Start program. After a child reaches age 8, the parent may continue to participate in adult and parenting education until the parent is no longer eligible for services under the Adult Education Act or for two years, whichever comes first. Until then, a child who otherwise would be ineligible may continue to participate in appropriate project activities. Similarly, if a parent is no longer eligible for services because of educational advancement, the family may continue to participate in the program until all children in the family reach age 8. In this case, the parent may continue to participate in appropriate activities such as parenting education.

The average age of Even Start children has fluctuated over the years—from 4.3 years in 1989-90, to 3.7 years in 1992-93, 4.4 years in 1994-95, 3.8 years in 1995-96, and 4.2 years in 1996-97. Children in the 3- to 5-year-old age range have always constituted the largest group (42-47 percent, Exhibit 3.3). The fluctuations were due to shifting enrollment rates of very young children and school-age children. These changes may reflect, in part, the requirement, effective 1995-96, to target at least a three-year range of early childhood education services.

Exhibit 3.3: Percent of Participating Children, by Age: 1994-95, 1995-96, and 1996-97 Participants

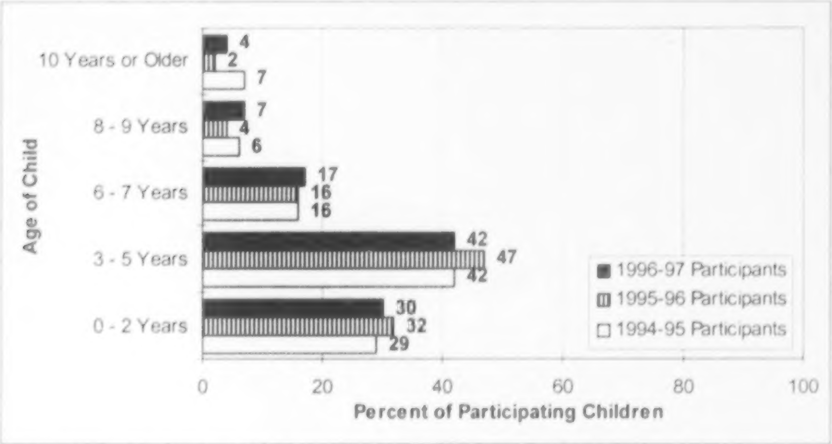


Exhibit reads: 42 percent of children participating in Even Start in 1996-97 were between the ages of 3 and 5 years.

The most noticeable recent trend has been a steady increase of infants and toddlers among new enrollees (even though the increase has not been large enough to substantially lower the overall average age of participating children). Thirty-six percent of children who enrolled in 1995-96 were under age 3; 38 percent of 1996-97 new children were under age 3 (not shown in exhibit). School-age children still within the Even Start eligible age range constituted 13 percent of 1996-97 enrollees, the same level as the year before.

The increase of infants and toddlers coincided with the increase of teen parents. Most (79 percent) of the children who enrolled in 1996-97 and who had teen parents were in the 0-2 age range (11 percent out of 14 percent, Exhibit 3.4). In contrast, infants and toddlers constituted about one-third (19 percent out of 54 percent) of all children who had 20-29-year-old parents. As for gender, boys and girls have been represented equally among Even Start children throughout the program's history.

Exhibit 3.4: Percent of Children, by Age and Age of Parents: 1996-97 New Enrollees

	All	Child Age in Years				
Parent Age	Children	0-2	3-4	5	6-7	8+
Less than 20	14%	11%	2%	<1%	<1%	<1%
20-29 years	54%	19%	19%	6%	7%	2
30-39 years	27%	6%	9%	4%	5%	3%
40 or older	6%	1%	2%	1%	1%	1%

Note. The percentages are based on 29,013 child records (new 1996-97 enrollees) with data for parent age and child age. In approximately 7 percent of all families that had multiple adults participating, the age of the first adult was used.

Exhibit reads: Of all children who enrolled in 1996-97, 11 percent were younger than 3 years of age and had teen parents, while approximately 3 percent were older than 2 years and had teen parents.

FAMILY STRUCTURE AND SIZE

The composition of Even Start families has remained fairly consistent over the years—roughly one-half are two-parent families, nearly 40 percent headed by single parents, and about 10 percent are extended families.[28] However, among the 1995-96 and 1996-97 new enrollees, there were slight increases in the proportion of extended families (14 percent and 16 percent, respectively) and a slight decrease in the percentage of single- and two-parent families (Exhibit 3.5).

Exhibit 3.5: Percent of Families by Family Structure: 1992-93 and 1994-95 Participants, 1995-96 and 1996-97 New Enrollees

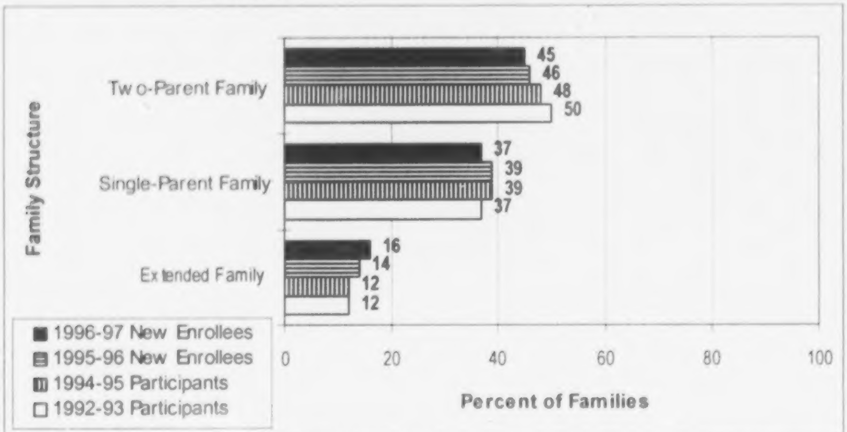


Exhibit reads: In 1996-97, 45 percent of families who enrolled in Even Start were two-parent families.

These changes reflect the rising enrollment of teen parents and their living arrangements that diverge from the typical Even Start families of previous years. Projects reported that 41 percent of teen parents enrolling in 1996-97 were single parents, 25 percent were part of two-parent families, and 35 percent lived in extended families. These percentages, especially the higher percentage of extended families, differ substantially from the "traditional" Even Start family data. Further, 40 percent of the teens described as single parents reported having two or more adults living in their households.

---

[28] The term "Even Start family" in this report refers to the nuclear or extended family that includes at least one adult and one child participating in Even Start, and, in all but very unusual cases, living in the same household. (Not all individuals in the family necessarily participate in Even Start.)

Our descriptions of Even Start family structures are likely to be approximations. The data collection form for the second evaluation did not clearly define the term "extended family." The term referred somewhat loosely to Even Start families that include additional family members beyond a single-parent or two-parent nuclear family unit living in the same household. The data did not allow us to parse out the possible overlap of a single-parent or a two-parent family living in an extended family. This issue should be kept in mind when interpreting findings involving family structure.

Similar to the previous program year, the average Even Start household had 5.5 persons in 1996-97.[29] The average number of children in Even Start families also remained stable over the last several years. Among the 1996-97 new enrollees, 43 percent had one child, and 35 percent had two children in the Even Start eligible age range—birth through age 7. Further, a large majority (94 percent) also had one or two children over age 7.[30]

The most common Even Start family structure was a couple, between the ages of 20 and 39, with two to four children. However, another large group of families was headed by single parents with two to four children.

Almost all adult participants, 97 percent, were the parents of participating children. In only a very small percentage of families, grandparents (1.6 percent) or other adults (1.9 percent) received Even Start services instead of children's parents.

FAMILY ECONOMIC STATUS AT INTAKE

Even Start families clearly represent the economically disadvantaged segment of the population. More than 80 percent of families enrolling in Even Start in the last two program years reported annual incomes below $15,000; over 40 percent of families earned and/or received annual incomes of less than $6,000 (Exhibit 3.6). On average, these families had five to six members in their households. The levels of income among Even Start families have remained consistent since 1992-93.[31]

---

[29] The slight increases in the percentage of extended families among families enrolling in the last two years of the evaluation did not affect the average household size across all participating families.

[30] Although the percentage of teen parents has increased among new enrollees in the last two evaluation years, it is possible that the teens' *households* may have older children of other adults living in the household.

[31] The income ranges used in the previous evaluation do not coincide exactly with the ranges used in the current evaluation.

Exhibit 3.6: Percent of Families, by Family Annual Income: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees

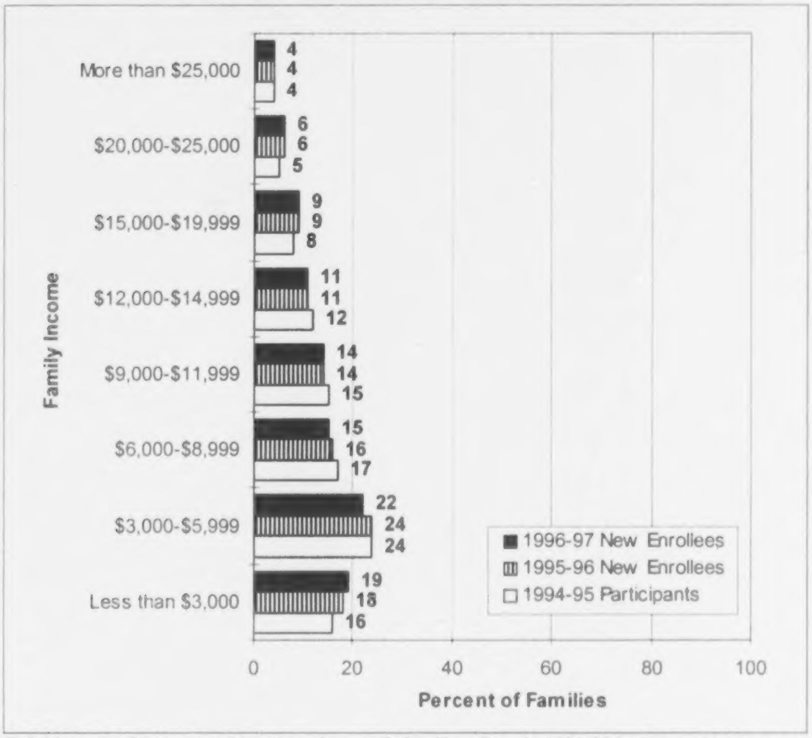


Exhibit reads: 19 percent of families who enrolled in Even Start in 1996-97 had annual incomes below $3,000.

Since the family income data were reported in income ranges (e.g., $3,000-$5,999), and because of the inconsistent references to *family* and *household*, we could not determine precisely whether a family was below the federal poverty level. However, using a "conservative" estimate based on the upper limits of these ranges (i.e., assuming that each family received the maximum of the income range it reported) and the number of people living in the same household, we estimated that 90 percent of Even Start families participating in 1996-97 had incomes at or below the federal poverty level. (The 1996 federal poverty level was $15,911 for a family of four.)

It is possible that the remaining 10 percent were *mis-classified* as being above the poverty level because of the conservative method we used in estimating this measure. We do know that 37 percent of parents thus classified did have limited English proficiency; 85 percent lacked a high school diploma or GED.

SOURCES OF FAMILY INCOME

Among the families who enrolled in Even Start in 1996-97, 49 percent reported that their primary source of income was employment wages, while 43 percent relied on government assistance as their major source (Exhibit 3.7). The sources of income listed as "Other" included alimony and child support (2 percent) and various forms of government assistance such as Social Security, Supplementary Support Income (SSI), pensions and retirement benefits, and a combination of wages and government assistance (5.5 percent).

Exhibit 3.7: **Percent of Families by Primary Source of Family Income: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees**

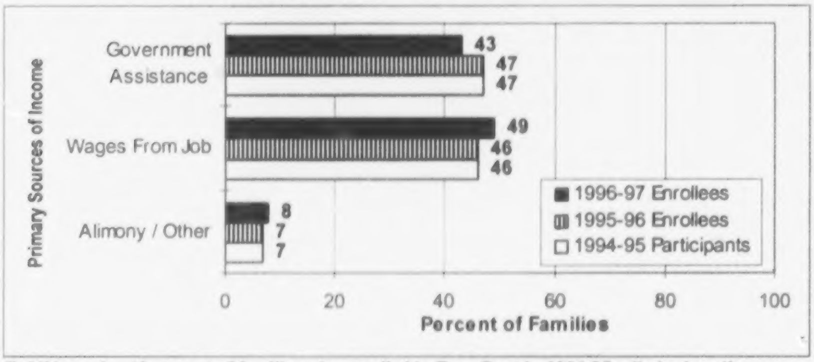
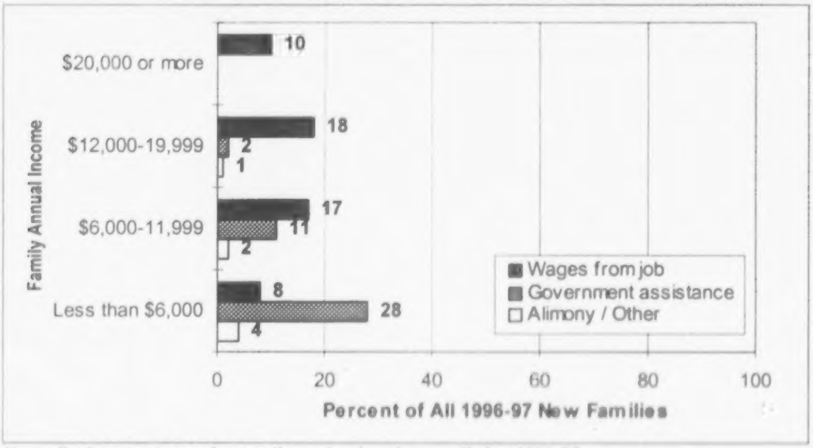


Exhibit reads: 43 percent of families who enrolled in Even Start in 1996-97 relied primarily upon government assistance for income, a 4-percentage point decrease from 1995-96.

Among the 1996-97 new families, 28 percent had annual incomes higher than $12,000 and most of their income was from job wages (Exhibit 3.8). Another 2 percent of new families also earned most of their incomes, but they received les than $12,000. Twenty-eight percent of new families received annual incomes o less than $6,000 which was mostly from government assistance.

Exhibit 3.8: **Percent of Families, by Primary Source of Family Income and Income Level: 1996-97 New Enrollees**



Note: Each percentage refers to all new families that enrolled in 1996-97.

Exhibit reads: Among new families enrolling in 1996-97, 28 percent received annual incomes of less than $6,000 primarily from government assistance..

It is too early to detect any significant impact of welfare reform on economic circumstances of Even Start families. There are some indications in the data that percentages of families that rely mostly on wages may be increasing and those relying mostly on government assistance decreasing (see Exhibit 3.7). However, the percentages of parents receiving public assistance at the time of intake (whether or not this was their primary source of income) have fluctuated somewhat in the last three years of the second evaluation: 44 percent of 1994-95 participants; 53 percent among parents enrolling in 1995-96; and 50 percent among 1996-97 new enrollees.

The level of Even Start family income from all sources has remained fairly stable over the last several years. However, reliance on government assistance among Even Start families may begin a gradual decline in coming years. A higher percentage of teen parents received public assistance at the time of intake in 1996-97 than did older parents (Exhibit 3.9). As the percentage of teen parents in Even Start rises, this may raise the percentage of families receiving government assistance. Simultaneously, however, a slight decline in receipt of government assistance was observed across all parent age groups (ranging 2-5 percentage points, Exhibit 3.9).

If the family income level remains consistently low but the receipt of public assistance declines, one possible explanation might be the impact of welfare reform. Because the changes in data are fairly slight and welfare reform is still relatively new in most states, it is premature for us to identify clear impacts. However, these trends should be monitored closely in the coming years.

Exhibit 3.9: Percent of 1995-96 and 1996-97 New Enrollees Receiving Government Assistance at the Time of Enrollment, by Parent's Age

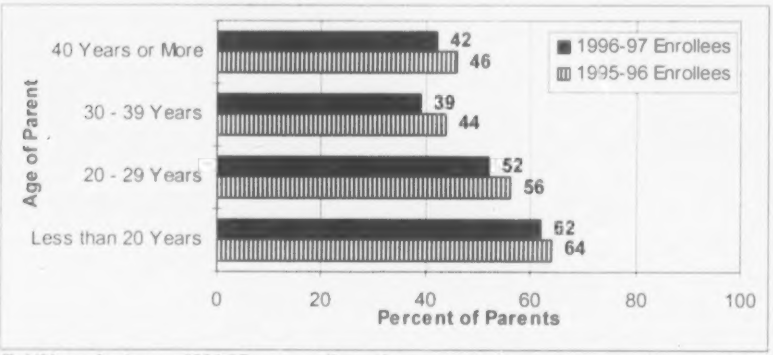


Exhibit reads: Among 1996-97 new enrollees, 42 percent of parents 40 years or older were receiving government assistance at the time of enrollment.

PARENTS' EMPLOYMENT STATUS AT ENROLLMENT

Employment status is an important indicator of a family's capacity for self-sufficiency and likely will become more critical to Even Start participants in the context of welfare reform. Wages from employment represented the primary source of income for 49 percent of Even Start *families* who enrolled in 1996-97. However, only 26 percent of *parents* who enrolled in Even Start were employed at the time of intake (Exhibit 3.10). Further, 41 percent of families where *participating parents* were not employed reported job wages as their primary source of income.

Exhibit 3.10: Employment Status and Plans of Parents Who Enrolled in 1996-97, by Parent Age

		Parents' Age in Years			
Employment Status/Plans	**All New Enrollees**	**Less than 20**	**20 - 29**	**30 - 39**	**40 or Older**
Employed at enrollment: 26 percent of all 1996-97 new enrollees					
Full-time job	**14%**	5%	13%	20%	20%
Part-time job	**12%**	12%	11%	13%	12%
Job training program	**1%**	1%	1%	1%	<1%
Not employed at enrollment: 73 percent of all 1996-97 new enrollees					
Enrolled in school or educational program	**35%**	51%	35%	27%	23%
Currently seeking job	**12%**	12%	13%	11%	12%
Currently not seeking employment	**24%**	18%	26%	25%	24%
Retired or disabled	**2%**	<1%	1%	3%	10%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Exhibit reads:* *5 percent of teen parents who enrolled in Even Start in 1996-97 were working full-time at the time of enrollment.

Recall that almost half of Even Start families were headed by couples. The seemingly contradictory data suggest that in many two-parent families, one parent (generally the mother) participates in Even Start, and the other parent earns most of the family income in wages.[32]

The rate of full-time employment among teen parents was below the rates for older parents (5 percent versus 13-20 percent) since many teens were attending high school. However, the teen parents were quite employment-oriented. They were as likely to be working part-time or seeking employment, and less likely to report not seeking employment, as older parents (Exhibit 3.10).

BEST COPY AVAILABLE

---

[32] The second national evaluation did not collect data on the employment or educational status of non-participating parents.

WHAT WERE THE EVEN START PARTICIPANTS' NEEDS FOR EDUCATIONAL SERVICES?

Even Start is designed to target families most in need of its services based on two primary criteria: low income and low level of adult literacy skills. Projects are also encouraged to consider other need-related factors in targeting and recruiting families.

PARENTS' EDUCATIONAL BACKGROUND

Even Start parents' educational backgrounds vary widely.[33] As shown in Exhibit 3.11, a complete lack of formal schooling was rare, reported by only 2 percent of parents enrolling in 1996-97. The highest grade completed for 30 percent of 1996-97 new enrollees was between the 7th and 9th grades; 13 percent of new enrollees had not progressed beyond the primary school grades.

Exhibit 3.11: Percent of Parents, by Educational Background at Enrollment: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees

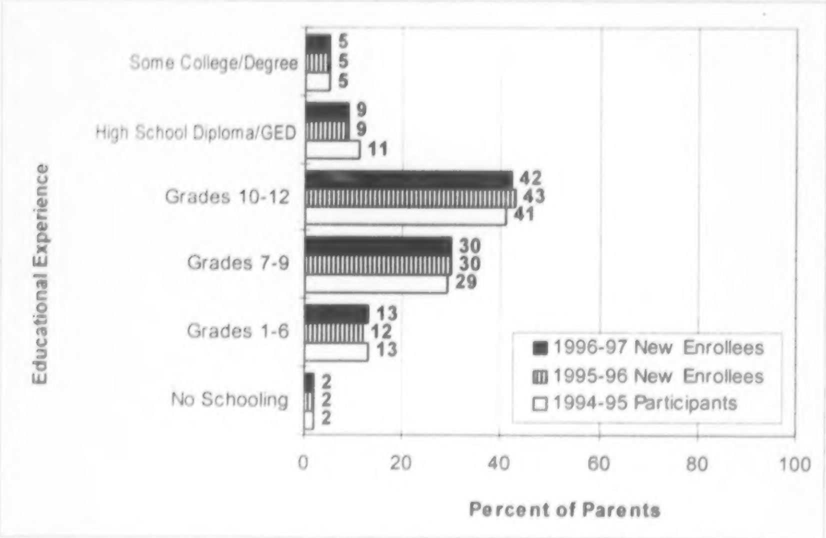


Exhibit reads: 2 percent of parents who enrolled in Even Start in 1996-97 had no schooling before enrolling in Even Start.

---

[33] Throughout this report, descriptions of parent characteristics refer to parents participating in Even Start because this evaluation collected background information only for participating parents. If one parent from a two-parent family participated, characteristics such as years of education completed and English language proficiency of the *participating parent* are represented in the analysis results.

Parents with only a primary school education were more common among older than younger parents, constituting 33 percent of parents 40 years or older (Exhibit 3.12). Given that the average Even Start parent participated in slightly less than 100 hours per year of adult education services (see Chapter 6), many parents face a long and difficult road before completing their basic education goals. The largest group of parents (42 percent) had reached the latter half of high school (10th to 12th grade) but had not graduated.

Even Start has served less well-educated parents since 1992-93. The percentage of adults with no high school diploma or GED at the time of intake in 1992-93 was 79 percent for participating parents. In contrast, 86 percent of 1996-97 enrollees had neither completed high school nor earned a GED.

The percentage of Even Start parents with 9th grade or less education (45 percent in 1996-97) was closely representative of parents with no more than a 9th grade education among all *Even Start-eligible* families in the general population (47 percent) (Nord, in preparation). However, a substantial percentage of parents who were 30 years of age or older had no more than a 6th-grade education (Exhibit 3.12). For the projects, parents with very low levels of education may pose greater difficulties in such areas as designing an effective curriculum and retaining participants over several years.

In the last three years of the second evaluation, about 15 percent of participants and new enrollees reported having a high school diploma, GED, or post-secondary education at the time of enrollment in Even Start. This was a decline from 21 percent for the 1992-93 participants. Even Start services received by the 1996-97 new parents who enrolled with at least a high school diploma or GED are discussed in Chapter 6.

Exhibit 3.12: Percent of Parents, by Educational Background at Enrollment and Parent Age: 1996-97 New Enrollees

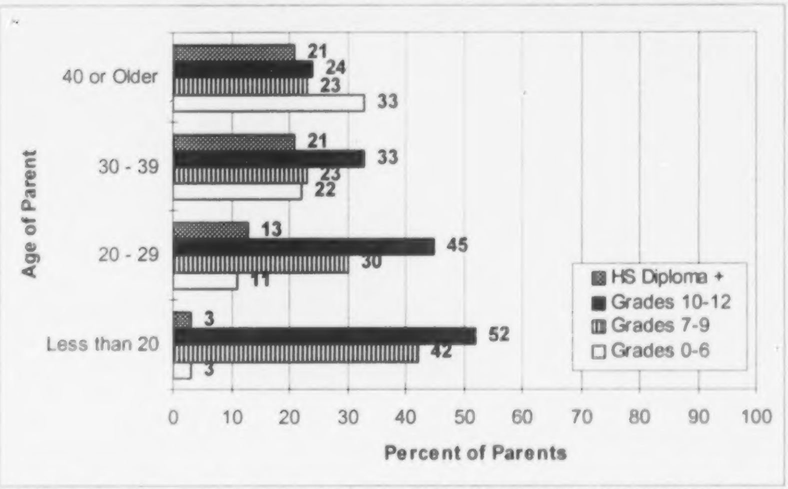


Exhibit reads: 52 percent of teen parents who enrolled in 1996-97 had reached 10th-12th grades but had not completed high school at the time of enrollment.

EXPERIENCE WITH ADULT EDUCATION AND EMPLOYMENT TRAINING

At most, 40 percent of parents had participated in some form of adult education before enrolling in Even Start, mostly at the level of secondary education and GED preparation (Exhibit 3.13). For the majority of parents, Even Start was their first experience with adult education programs. Many parents with very limited educational achievements and/or English proficiency *had not participated in any other program to improve these skills before Even Start.* Despite the high percentage of parents with limited English proficiency (31 percent of the 1996-97 new enrollees), only 12 percent had participated in ESL programs before Even Start. Similarly, though roughly 15 percent of parents had very limited educational backgrounds (6th grade or lower), only 7 percent of the 1996-97 new enrollees had participated in beginning or intermediate adult basic education before Even Start.

Exhibit 3.13: Percent of Parents, by Previous Adult Education Experiences: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees

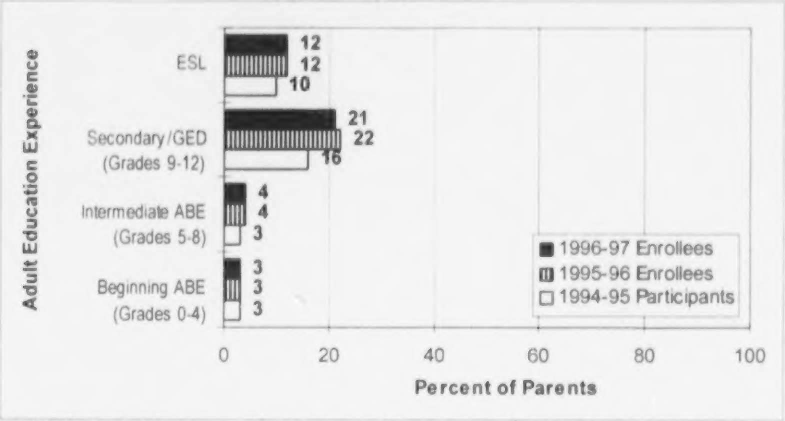


Exhibit reads: 12 percent of parents who enrolled in Even Start in 1995-96 and 1996-97 had participated in ESL services before Even Start.

Generally, Even Start parents were young adults who had completed some high school grades at the time of intake. These background factors may explain why only a small percentage (less than 8 percent) had participated in employment or vocational training before or at the time of enrolling in Even Start. In addition to lacking a high school diploma or GED, most parents had received no job skill training before Even Start. In the context of welfare reform, Even Start projects may be challenged to incorporate more vocational and employment-training materials and activities in their adult education curriculum while maintaining the primary objective of basic academic and literacy education.

RACIAL/ETHNIC BACKGROUND AND LENGTH OF RESIDENCE IN THE UNITED STATES

The racial/ethnic composition of Even Start participants has important implications for the design and the delivery of Even Start services. Race/ethnicity is related to the languages families use at home and, for language-minority groups, their levels of English proficiency. In addition, in multi-racial/ethnic communities, educational activities can serve as opportunities for people to interact with members of different racial/ethnic groups, providing benefits for individuals and the community beyond the specific educational objectives. At the same time, racial/ethnic, cultural, and linguistic diversity increases the difficulty of developing culturally sensitive and appropriate instructional materials and approaches.

The Even Start community includes a wide spectrum of racial/ethnic backgrounds, and notable changes in the relative mix of major racial/ethnic groups have occurred since the program began.[34] Exhibit 3.14 shows that since 1992-93 the proportion of Hispanic families in Even Start has increased substantially, from 22 percent to 39 percent among the 1996-97 participants. This rate of increase far surpassed the increase of Hispanics in the national population from 10 percent in 1992 to 11 percent in 1997 (U.S. Bureau of the Census, 1998).

In Even Start, offsetting the increase of Hispanic families, the relative percentages of Caucasian, African American, and Asian families declined between 4 to 8 percentage points. The representation of American Indian families has remained fairly stable between 2-4 percent since 1992-93.

Exhibit 3.14: Racial/Ethnic Backgrounds of Even Start Parents: 1992-93, 1994-95, 1995-96, and 1996-97 Participants

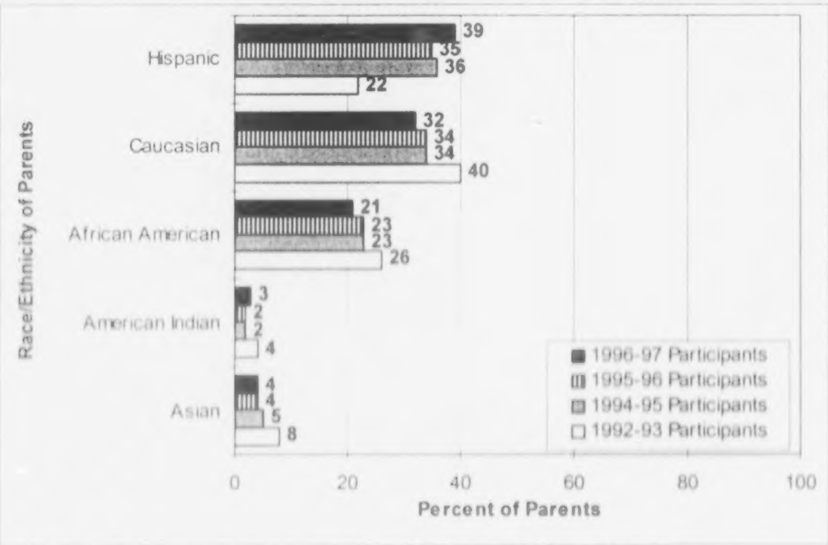


Exhibit reads: 39 percent of parents participating in Even Start in 1996-97 were Hispanic.

The distributions of racial/ethnic groups varied in different regions of the country. Hispanic families constituted the largest group in the western and southern region projects, while Caucasian families represented the largest group in the Northeast and Midwest (Exhibit 3.15).

While Hispanic and Asian families are represented in all regions, their above-average concentration in some states suggests that the need for ESL programs is particularly critical in these areas. States where more than 50 percent of Even Start parents were Hispanic were Arizona, California, Colorado, District of Columbia, Iowa, Nevada, New Jersey, New Mexico, Oregon, Puerto Rico, Rhode Island, and Texas. Seventy-eight percent of parents enrolled in the

---

[34] For most of the analyses that incorporated the "family" race/ethnicity, the race/ethnicity of participating parents was used.

Migrant Education Even Start projects were Hispanic, although they constituted only 9 percent of all Hispanic parents participating in Even Start in 1996-97.

Exhibit 3.15: Racial/Ethnic Backgrounds of Even Start Parents, by Region: 1996-97 Participants

Racial/Ethnic Group	Northeast	South	Midwest	West
Hispanic	29%	39%	21%	65%
Caucasian	48%	29%	46%	14%
African American	19%	30%	23%	3%
Asian	4%	2%	6%	6%
American Indian	1%	1%	4%	12%
Total	101%	101%	100%	100%

Note: Some column totals exceed 100 percent due to rounding

***Exhibit reads:** In 1996-97, 29 percent of families participating in Even Start in the Northeast region were Hispanic.*

African American families represented the second largest racial/ethnic minority group in Even Start (21 percent of all 1996-97 participants). They were most prevalent in the South. States where more than 50 percent of Even Start parents were African American were Alabama, Delaware, Georgia, Maryland, Mississippi, and South Carolina.

The Asian and Pacific Islander families comprised a small percentage of the Even Start population (4 percent of all 1996-97 participants). States where more than 10 percent of Even Start parents were Asian were Hawaii, Kansas, Minnesota, Nebraska, and Wisconsin.

The number of American Indian families in Even Start was small (3 percent of all 1996-97 participants). States where more than 20 percent of Even Start parents were American Indian were Alaska, Oklahoma, Montana, North Dakota, South Dakota, Utah, and Washington. Of the 1,236 parents who identified themselves as American Indian, only 473 (38 percent) were enrolled in the nine special set-aside, tribal Even Start projects. The majority participated in state-administered, non-set-aside projects.

As reported earlier, two-parent families represented 45 percent of the new enrollees, and single-parent families represented 37 percent. However, the majority (64 percent) of African American families who enrolled in 1996-97 was headed by single parents, compared to 13 percent of Asian, 20 percent of Hispanic, and 33 percent each of American Indian and Caucasian families. Thus, many African American parents participating in Even Start may experience the social, economic, and parenting difficulties associated with single-parent families.

Economically, the Hispanic and Asian families in Even Start were less impoverished as a group than other racial/ethnic minority groups. However, they were more likely to experience problems related to limited English proficiency than were other families. Thirty-three percent of Hispanic families and 47 percent of Asian families who enrolled in 1996-97 had lived in the

United States for five or fewer years at the time of enrollment. These percentages have increased since 1995-96 (Exhibit 3.16).[35] Many families who have lived in the United States for only a few years are likely to experience problems with their second language.

Exhibit 3.16: Percent of Parents Who Had Lived in the United States for Five Years or Less at the Time of Enrollment, by Race/Ethnicity: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees

Race/Ethnicity of Parents	1994-95	1995-96	1996-97
Asian/Pacific Islander	44%	39%	47%
Hispanic	32%	30%	33%
Caucasian	2%	2%	3%
African American	3%	3%	2%
American Indian	0%	1%	1%

Note: Each percentage represents parents in the specific racial/ethnic and program year group who were recent immigrants compared to all parents of the specific racial/ethnic and program year group. Thus, the percentages do not total to 100 by row or column.

Exhibit reads:* *Among Asian/Pacific Islander families who enrolled in Even Start in 1996-97, 47 percent had lived in the United States for five years or less.

ESL PARENTS' ENGLISH PROFICIENCY

Thirty-nine percent of parents who enrolled in 1996-97 reported speaking languages other than English at home at the time of enrollment: 32 percent spoke Spanish and 7 percent spoke other languages. The increase from 34 percent among the 1992-93 participants is not surprising, since more than 40 percent of Even Start parents were Hispanic, Asian, or Pacific Islanders in the last year of the second evaluation. The percentage of parents who speak Spanish at home has increased from 26 percent in 1992-93, reflecting the increase of Hispanics in the Even Start program.

About one-fourth of the new parents who spoke a language other than English at home could speak and/or read English well or very well; about one-third could understand English well or very well.[36] The remainder of these parents, however, had difficulties in understanding, speaking, and/or reading English (Exhibit 3.17). They were more limited in their reading and speaking abilities. Nearly one-third of new parents who reported speaking languages other than English at home were unable to read and/or speak English at all.

---

[35] For families in which various family members immigrated to the United States at different times, the data collection instrument asked for the longest period of residence in the United States by any family member. This instruction was problematic in cases where family members who immigrated first were not participating in Even Start and the "late comers" were the participants. In these families, "the (longest) length of residence in the United States" may overestimate English proficiency for the family and discount the extent of language difficulty that *participating family members* experience. The written instructions in the data collection instrument were not revised, but local projects were instructed to report the length of residence for the *participating* members of the family, as appropriate.

Exhibit 3.17: Percent of ESL Parents, by Limited English Proficiency Level: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees

	1994-95		1995-96		1996-97	
English Language Ability	**Not Well**	**Not at All**	**Not Well**	**Not at All**	**Not Well**	**Not at All**
Reading English	47%	30%	46%	30%	45%	31%
Speaking English	50%	26%	49%	29%	48%	29%
Understanding English	50%	21%	48%	25%	48%	23%

***Exhibit reads:** 31 percent of non-English-speaking parents who enrolled in 1996-97 could not read English at all.*

Hispanic and Asian parents, on average, had less formal education than Caucasian, African American, and American Indian parents (Exhibit 3.18, the first column). The educational levels of primarily English-speaking groups (i.e., Caucasian, African American, and American Indian parents) averaged around the 10th grade and were relatively similar across these groups. However, the Hispanic and Asian parents' educational experiences averaged around the 8th grade.

Exhibit 3.18: Average Years of Education Completed at Enrollment, by Parent Age and Race/Ethnicity (1996-97)

		Parent Age			
	Across All Age Groups	**Less Than 20 Years**	**20-29 Years**	**30-39 Years**	**40 Years or Older**
Hispanic	**8.6**	9.0	8.9	8.5	7.0
Caucasian	**10.3**	9.6	10.3	10.7	10.4
African American	**10.2**	9.8	10.4	10.5	10.0
Asian	**8.1**	8.7	8.3	8.6	6.5
American Indian	**10.7**	9.8	10.8	11.2	10.5
Across All Racial/Ethnic Groups	**9.5**	**9.6**	**9.8**	**9.5**	**8.4**

Note: The years of education correspond to academic grades (e.g., 1=1st grade, 9=9th grade).

***Exhibit reads:** Among parents who participated in Even Start in 1996-97, Hispanic parents younger than 20 years had reached, on average, the 9th grade in high school.*

Within each racial/ethnic group, the average educational levels were fairly constant across parents' age groups, except for Asian and Hispanic parents 40

---

[36] These parents constituted 7 percent of all parents who enrolled in 1996-97. Their educational backgrounds ranged from primary grades to postsecondary education. Less than 2 percent of all Even Start parents were not native English speakers, but were proficient in English and had at least a high school diploma.

BEST COPY AVAILABLE

years or older who averaged more than one grade level lower than younger parents (Exhibit 3.18). Further, 90 percent of Asians and 88 percent of Hispanic parents in this age group had received most of their previous schooling outside the United States (not shown in exhibit).

The composite profile of Even Start parents as a group points to increasing educational needs, and consequently, points to greater challenges for projects trying to meet these needs. Since 1992-93, projects have enrolled higher percentages of parents with no high school diploma or GED and parents with limited English proficiency. Although the majority of Even Start parents have completed all but a few years of high school education, many older parents who are Hispanic or Asian present much greater needs for services. Further, a large portion of Even Start parents had not received any adult education or vocational/employment training before enrolling in Even Start.

CHILDREN'S PARTICIPATION IN NON-EVEN START PROGRAMS

For many children, Even Start provided their first experience with early childhood education. The percentage of children enrolling in Even Start with no prior educational experiences increased substantially since 1994-95 from 43 percent to 58 percent (see Appendix B, Exhibit B.2). This increase, at least in part, reflects the rise of infants and toddlers entering the program. Among the 1996-97 new enrollees, the most common pre-Even Start programs that children had experienced were kindergarten and Head Start (12 percent and 13 percent, respectively).

For 52 percent of children who enrolled in 1996-97, Even Start was the only educational program in which they were participating at the time of intake, compared to 38 percent among the 1994-95 participants. The other children who enrolled in 1996-97 were attending primary schools (11 percent), kindergartens (9 percent), and Head Start (9 percent) in addition to Even Start. Most of the educational services these children received in addition to Even Start also were public programs.

HOW MANY CHILDREN HAVE SPECIAL NEEDS?

Project staff were asked each year to indicate whether a child had been identified as having any special needs.[37] Eleven percent of Even Start children participating in 1996-97 were reported to have special needs, which is consistent with the national average and the rates in 1994-95 and 1995-96.[38] The prevalence of children with special needs in Even Start was comparable with the 13 percent of such children reported in the Head Start Program.

---

[37] The Even Start statute requires each applicant project to describe the methods it will use to provide services to individuals with special needs, such as limited English proficiency and physical and/or learning disabilities.

The most common type of special need was speech/language impairment (44 percent of children with special needs), followed by developmental delays (29 percent, see Appendix B, Exhibit B.3). Thirteen percent of the special-needs children had been diagnosed with a specific learning disability. For 23 percent of the children with special needs, project staff indicated problems other than those we listed. Many of these "other" special needs involved attention deficit disorder or a wide range of medical/health problems.

In providing educational services for these children, projects need to address their special needs, either as part of the program services or through referrals to other agencies. In Chapter 5, we report that 28 percent of children participating in 1996-97 received health care/referral/screening, and 10 percent received counseling (Exhibit 5.16).

WHO ARE THE NEEDIEST OF EVEN START FAMILIES?

The law requires Even Start projects to recruit and serve families "most in need" of Even Start services; the law indicates that families "most in need" are those with a low level of income, a low level of adult literacy or English language proficiency, and "other need-related indicators." However, the law does not provide specific criteria of "family need," thus creating a major challenge in answering the question: "Do projects serve families most in need?" The type and extent of family needs vary in different communities. To answer this question, we would need to compare the characteristics of Even Start families with all families living in the project's service area—an approach not possible within the scope of this evaluation.[39] Thus, for the 1994-95 evaluation report we developed a data-based working definition of "the neediest Even Start families." The working definition was based on (1) types of economic, educational, and social disadvantages relevant to the Even Start program and (2) distributions of Even Start participants on these characteristics. The working definition was further refined in 1995-96 and 1996-97.[40]

---

[38] We did not ask who identified the presence of special needs (e.g., Even Start staff, medical professionals, child's parents). Even Start staff may assume the primary responsibility for identifying needs that are directly related to education, such as specific learning disabilities. Other types of needs (e.g., visual, hearing, and orthopedic impairment) may involve testing by medical professionals.

[39] Economic characteristics of Even Start families as a whole or by state could be compared to similar national or state statistics. For example, 11 percent of all households in the United States had incomes below the federal poverty level (compared to 90 percent of Even Start households); nationally, 18 percent of adults over age 25 had not graduated from high school (compared to 86 percent of all Even Start parents) (the population data are from the 1996 Current Population Survey, U.S. Bureau of the Census). The Even Start population clearly represents an extremely disadvantaged segment of the population economically and educationally. However, this type of comparison does not answer the question of whether Even Start projects serve families most in need of their services in their communities.

WORKING DEFINITION OF NEEDIEST EVEN START FAMILIES

The following seven features of families were used as indicators of family need level:[41]

- **Family at or below the federal poverty index:** Conservative estimates using the total number of adults and children in the household and the upper limit of income range reported for each family. This criterion applied to 90 percent of families participating in 1996-97, at intake.[42]

---

[40] While the basic approach behind creating the composite need index has remained consistent since the 1994-95 analyses, the yearly refinements of this measure precludes comparing the extent of need among Even Start families over time. Yearly trends for each of the need indicator measures (e.g., income, educational levels) have been discussed in earlier sections of this chapter.

[41] Most of the data used to derive the need index represent family characteristics that can change over time such as family income, family structure, and parents' English proficiency. These data were collected for this evaluation only at the time of families' initial enrollment in the program. Approximately 40 percent of the 1996-97 participants had enrolled in prior years, and some of their need-related information may have changed by 1996-97. This was a potential problem in assessing the level of family need for continuing families in this evaluation. Neither increases nor decreases in the level of family need after enrollment were captured by the ESIS. At the same time, the changes would have affected the need index analyses only if they *raised* the family above the need threshold (e.g., an increase in income above the federal poverty level for the family, a change from a single-parent to a two-parent family, or significant improvements in parents' English proficiency).

[42] Because the ESIS asked for *family* incomes, it is possible that in large households (e.g., extended families), there may have been incomes besides the *Even Start family's* reported income.

- **Receiving government assistance:** Families who relied on government assistance as the primary source of income and/or families in which at least one participating adult was receiving government assistance at the time of intake. This criterion applied to 59 percent of families participating in 1996-97, at intake.[43]

- **Limited educational experience:** Families in which at least one participating parent was educated at or below the 9th-grade level; this criterion applied to 48 percent of families participating in 1996-97, at intake.

- **Limited English language proficiency:** Families in which at least one participating parent spoke a language other than English at home and had difficulty reading, speaking, and/or understanding English; this criterion applied to 33 percent of families participating in 1996-97, at intake.

- **Single-parent family:** This criterion applied to 36 percent of families participating in 1996-97, at intake.[44]

- **Multiple children:** Families with four or more children ages 15 or younger; this criterion applied to 40 percent of families participating in 1996-97, at intake.

- **Children with disabilities:** Families in which at least one participating child had a disability; this applied to 14 percent of families participating in 1996-97.[45]

We assigned each family a need index value based on the number of the seven characteristics on which the family matched our working definition of "needy." The need index that resulted represents a combination of multiple disadvantages including extreme poverty; limited educational experiences; limited English proficiency; problems associated with single-parent family status; the difficulty of raising multiple children given limited income and earning capacity; and having a child(ren) with disabilities. Families' need index scores could range from zero to seven, where zero indicated a low level of need *relative to other Even Start families*, and seven indicated the presence of all seven disadvantages.[46]

---

[43] Reported receipt of public assistance was used as an indicator of poverty in addition to low family income. To the extent that some eligible families do not receive welfare due to pride or lack of information, this index may underestimate the level of economic need for some families relative to those who chose to receive public assistance.

[44] Membership in a single-parent family is used as an index of family need separate from family income or the number of people supported by the family income. This index is intended to represent the difficulties single parents face in parenting and managing all family responsibilities without help from a partner.

[45] Earlier in this chapter, we stated that 11 percent of *all children* participating in 1996-97 were reported to have special needs. The 14 percent reported here refers to *families* in which at least one child participating in Even Start has special needs. The percentage difference indicates that, in families with multiple participating children, only one child may have special needs.

For the approximately 31,500 families who participated in 1996-97 (and had data for the needy-family analyses), the average need index was 3.2.[47] Thus, on average, Even Start families had about three of the seven disadvantages listed above. Forty-five percent of families had four or more disadvantages, 18 percent had five or more, and about 3 percent had none of the seven disadvantages.[48] In the remainder of this report, families with four or more need indicators (or disadvantages) are referred to as the "very needy families."

For selected analyses, we grouped projects by the percent of very needy families according to our working definition. This approach does not mean that some projects fail to serve families who qualify as "most in need" in their communities. Our working definition indicates a family's level of need (or extent of disadvantage) in relation to all other families participating in Even

---

[46] Correlations among the seven need indicators are presented in Appendix B, Exhibit B.4. The correlations were generally low, the highest being .42 between "single parent" and "receiving welfare." No correlation was high enough to suggest that two or more variables represent essentially the same family characteristic.

The need index was derived as a family characteristic. Some of the seven need indicators were based on parent- and child-level data. In families with multiple adults and/or children participating in Even Start, the families were classified as having the specific need if at least one parent or child reported the need as defined above.

For parent's limited education and English proficiency, we marked a family as having these needs if at least one participating parent met the criteria set for the working definition of need. Data on education and English proficiency were collected only for participating parents. Thus, we could not determine whether some families marked as having these needs may include other adults with higher levels of education and English abilities who could reduce the extent of limitations experienced by the families.

If a family had data for four or more, but not all, of the seven indicators, we computed a prorated need index for the family based on available data. Families with missing data for four or more need indicators were excluded from analyses involving the need index. Of approximately 32,000 families for whom we received at least some data for the 1996-97 evaluation, 1.6 percent were excluded from the analysis of needy families due to incomplete data.

[47] The standard deviation of the need index was 1.4.

[48] The 3 percent of families with none of the seven need indicators may be an error resulting from the very conservative method used to determine whether a family income was at or below the federal poverty level. Further, these families may have experienced great needs that were not represented by the seven indices used in this analysis.

Start. As discussed earlier in this chapter, Even Start families as a whole are disadvantaged in many areas of functioning relative to the general population. In applying the working definition of "very needy families" and focusing our analysis on families who are needier than others, we must keep in mind that on the whole, Even Start projects are recruiting and serving needy families.

DEMOGRAPHIC CHARACTERISTICS OF THE NEEDIEST EVEN START FAMILIES

The average need index varied little across regions. However, as shown in Exhibit 3.19, families living in urban areas reported slightly higher levels of need than families living in rural areas, except in the South where the need levels were consistent across urban and rural communities.

Exhibit 3.19: Average Need Index, by Region and Type of Community: 1996-97 Participants

		Region			
	Total	Northeast	South	Midwest	West
Rural	3.1 (16,647)	3.0 (3,418)	3.3 (7,344)	2.9 (2,808)	3.2 (3,077)
Mixed	3.2 (6,406)	3.4 (770)	3.2 (3,598)	2.9 (1,096)	3.1 (942)
Urban	3.4 (14,230)	3.4 (2,551)	3.3 (5,260)	3.3 (3,218)	3.6 (3,201)
Total	3.2 (37,283)	3.2 (6,739)	3.3 (16,202)	3.1 (7,122)	3.4 (7,220)

Note: The numbers of 1996-97 families included in this analysis are indicated in parentheses.

Exhibit reads:* *In 1996-97, Even Start families in the rural areas of the Northeast had an average need index of 3.0 on a scale of zero to seven.

The average need levels were greater among some racial/ethnic groups. African American, Asian, and Hispanic families experienced an average of three to four needs; American Indian and Caucasian families experienced, on average, slightly fewer than three needs (Exhibit 3.20).

Exhibit 3.20: Average Need Index, by Parent Race/Ethnicity and Age: 1996-97 Participants

		Parent Age			
	Total	Less than 20 Years	20-29 Years	30-39 Years	40 Years or Older
Hispanic	3.5 (13,643)	3.4 (852)	3.4 (6,241)	3.6 (5,184)	3.8 (1,366)
Asian	3.4 (1,283)	3.4 (27)	3.3 (342)	3.2 (618)	4.2 (296)
African American	3.4 (7,449)	3.1 (1,735)	3.5 (3,728)	3.5 (1,482)	3.1 (504)
American Indian	2.9 (1,217)	2.8 (203)	2.8 (590)	3.2 (315)	3.2 (109)
Caucasian	2.8 (11,400)	2.5 (1,920)	2.9 (6,057)	2.9 (2,735)	2.8 (688)
Total	3.2 (34,992)	2.9 (4,737)	3.2 (16,958)	3.4 (10,334)	3.5 (2,963)

Note: The numbers of 1996-97 participating parents included in this analysis are indicated in parentheses.

Exhibit reads:* *On average, families with Hispanic teen parents had 3.4 of the seven need indicators in 1996-97.

Due to the small range of the need index (zero to seven), most average need scores differed only by decimal points. However, some differences (e.g., between 4.2 and 2.5) would translate into a typical family in one group experiencing two additional types of economic, educational, or social disadvantage compared to a typical family in the other group.

On average, families with parents ages 40 or older had somewhat greater needs (3.5) than families headed by teen parents (2.9). Asian parents age 40 or older (less than 1 percent of all parents) produced the highest need index. Compared to the Even Start average, this group was far more likely to have low education and limited English proficiency and somewhat more likely to be below the poverty level, receiving government assistance, and have four or more children.

PREVALENCE OF VERY NEEDY FAMILIES ACROSS PROJECTS

Virtually all Even Start families have economic and educational needs qualifying them for receiving Even Start services. Further focusing our attention on families with the greatest needs, we calculated the percentage of very needy families for each project. The average percentage of very needy families across all projects in 1996-97 was 45 percent. However, the prevalence of very needy families varied widely across projects. Ten percent of projects had 19 percent or fewer families with four or more needs; in another 10 percent of projects, at least 69 percent of their caseload had four or more needs.[49]

In Chapters 5 and 6, we examine (1) how projects respond to high percentages of very needy families in their service design and delivery and (2) the extent to which the very needy families are able to participate in Even Start services despite disadvantages that may hinder their participation.

PARENTS' REASONS FOR PARTICIPATING IN EVEN START

Parents' *primary* reasons for participating in Even Start indicate both the parents' assessment of their needs for Even Start services and their goals for participation. The reasons also provide information about the types of services that the projects need to provide in order to maximize retention.

---

[49] The working definition of very needy families was limited to somewhat imprecise measures of a few aspects of a family. It was possible that a very needy family headed by a single-parent who is a native English-speaker and who chooses to raise three children without receiving public assistance could have been classified as less needy. The need index was not intended to assess the actual extent of need of individual families, but rather, to serve as a tool for analytic purposes.

Fifty-six percent of new parents enrolling in 1996-97 cited educational advancement through Even Start adult education as their primary reason for enrolling in the program (Exhibit 3.21).

Exhibit 3.21: Percent of Parents, by Primary Reason for Participation and Parent Age: 1996-97 New Enrollees

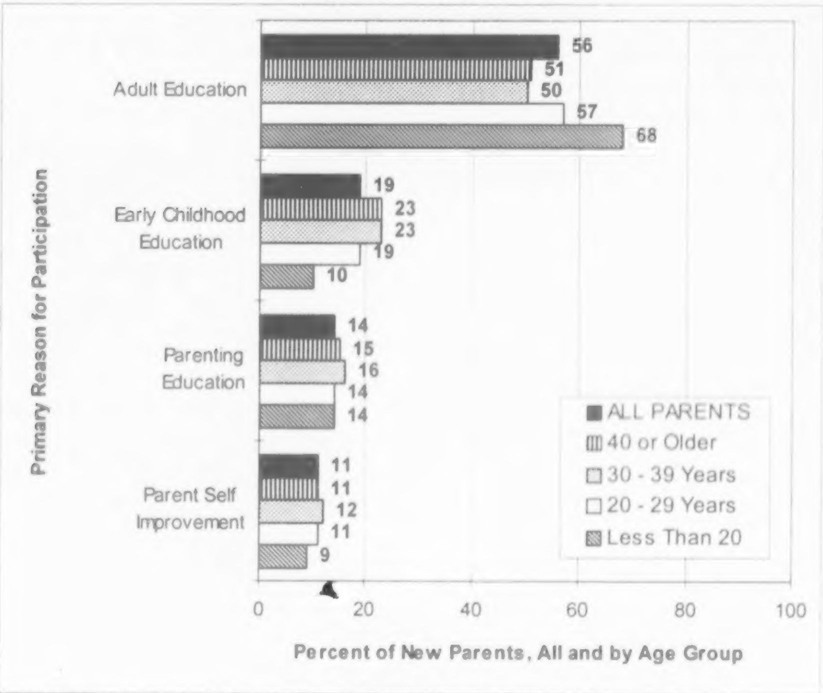


Exhibit reads: 56 percent of parents who enrolled in Even Start in 1996-97 stated their main reason for enrolling in Even Start was to improve their literacy skills and/or to further their education. Sixty-eight percent of teen parents cited this reason compared to 51 percent of parents 40 years or older.

The next most common reason, although much less frequent than the first, was a desire to improve their children's early childhood education opportunities (19 percent) and their own parenting skills (14 percent).[50] Eleven percent reported reasons such as improving employability (5 percent) and general self improvement (6 percent) as their primary reasons. This response pattern has been consistent for three years. Exhibit 3.21 also shows the primary reasons for enrollment given by parents of different age groups. Teen parents were more likely to emphasize adult education goals and less likely to stress early childhood education goals than were older parents.

---

[50] The enrollment reason related to adult education was based on combining two responses: "To further my education, to get a GED," and "To learn English." The reason related to early childhood education represents two responses: "To get my child into an infant/toddler/preschool program" and "To improve my child's chance of future school success." The reason related to parenting education represents two responses: "To become a better parent" and "To become a better teacher of my child." The reason related to self improvement represents two responses: "To improve my chances of getting a job" and "To generally improve myself."

It should be noted that the intake questionnaire asked parents to state the single most important reason for enrolling. Many parents who checked "Other" indicated that they had multiple reasons for enrolling, and many of the written answers were combinations of several reasons listed in the data collection instrument. Even then, the fact that adult education dominates parents' reasons for enrollment adds more challenges for projects: to maintain the balance of emphasizing the importance of all core service areas and to continue the efforts to integrate activities across the service areas.

WHAT ARE THE NEEDS OF EVEN START FAMILIES?: A REVIEW

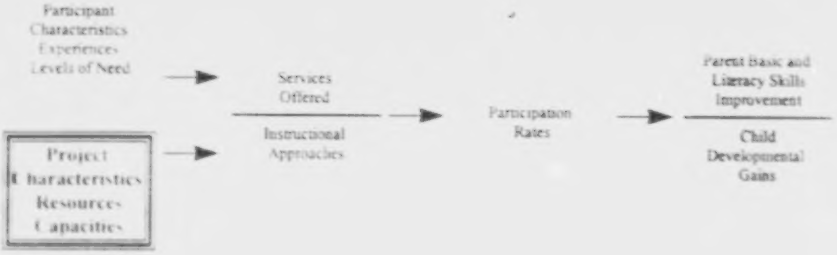
In requiring projects to serve families most in need, Even Start is unique among national educational programs that target low-income populations. Other programs generally have one or two specific need indicators as enrollment criteria. For example, Title I participants must reside in a high poverty area and in a school district where many children are educationally disadvantaged. Among Head Start families in 1996-97, the distribution of household income was virtually the same as the distribution for Even Start families. However, in terms of parents' educational background and English proficiency, Even Start families were more disadvantaged than Head Start families.[51]

The national evaluation has consistently shown that Even Start projects recruit and serve families who have substantial needs in multiple domains, including parents' economic self sufficiency, literacy and academic skills, parenting capabilities, and children's developmental opportunities. The profiles of participant characteristics attest to the projects' achievements in reaching very needy populations in their communities. The profiles also highlight enormous challenges inherent in implementing a comprehensive, integrated family literacy program that can accommodate the multiple needs of participants within available resources and time frame. Many seasoned practitioners working with Even Start have concluded that Even Start is "a very difficult program to implement." As we proceed to Chapters 4 and 5 to discuss program implementation issues and the amount and nature of services projects offered to Even Start participants, it is important to keep clear sight of the multiple challenges that projects and participants face together in their efforts to achieve their goals.

---

[51] Seventy percent of Head Start parents had at least a high school diploma or GED (Abt Associates Inc., 1997); 14 percent of Even Start parents had these credentials. Based on data on participants' ethnicity, we estimate that limited English proficiency was more prevalent among Even Start parents than among Head Start parents. In 1996-97, 39 percent and 4 percent of Even Start families were headed by Hispanic and Asian parents, respectively, while Hispanic and Asian children represented 25 percent and 1 percent of Head Start participants (United States General Accounting Office, 1998).

CHAPTER 4: WHAT RESOURCES SUPPORT THE EVEN START SERVICES?


Participant Characteristics Experiences Levels of Need
Project Characteristics Resources Capacities
Services Offered
Instructional Approaches
Participation Rates
Parent Basic and Literacy Skills Improvement
Child Developmental Gains

Although Even Start imposes few legal requirements concerning program operations, projects are expected to implement numerous service delivery approaches, including: staff development; integration across three educational components; interagency collaboration; provision of support services; some home-based services for each family; and parent and child time together.[52] Following a description of the community context for Even Start projects, this chapter presents the resources and activities that support Even Start educational services, including:

- Administrative and organizational contexts;
- Sources of funding;
- Staff resources and qualifications;
- Inservice training; and
- Interagency collaboration.

---

[52] The second national evaluation collected project-related data on two levels. Some data described each individual project as a unit. However, some projects implemented two or more different types of approaches (e.g., programs for teen parents attending high school and different programs for older parents provided in collaboration with a community college and a Head Start program). In the context of the second evaluation, the term "site" referred to service-delivery designs rather than to a physical or geographical location. Projects reported separate information on multiple sites/designs if they used more than one service-delivery approach.

Among the 605 projects that submitted data for 1996-97, 92 percent had one site/design; 5 percent had two sites/designs; and 3 percent had three to six sites/designs. The total number of project sites reported in 1996-97 was 655. Results of analyses based on project sites are noted as such in the exhibits and in the text.

BEST COPY AVAILABLE

WHERE ARE EVEN START PROJECTS LOCATED? WHAT NON-EVEN START SERVICES ARE AVAILABLE IN COMMUNITIES?

Approximately one-half (51 percent) of Even Start projects operate in rural areas (population less than 50,000). Thirty-four percent operate in urban areas (metropolitan area with population more than 50,000), and 15 percent operate in areas that included urban and rural communities. This distribution has remained consistent since 1993-94, in part, because it reflects the legislative requirement for representative distribution across urban and rural districts in each state.

As shown in Exhibit 4.1, many types of educational services provided by Even Start also were available through other programs in the communities where the projects operated (the term "community" connotes "service area" for each local project). The most widely available services were adult secondary education and GED preparation (88 percent), followed closely by early childhood education for 3-4-year-olds (83 percent), adult basic education (78 percent), and early childhood education for 5-year-olds (77 percent).

Family literacy programs, early childhood education for infants and toddlers, and parenting education were available in only 16 percent, 29 percent, and 48 percent of communities, respectively. Thus, Even Start makes special, unique contributions to these educational services in many communities.

Exhibit 4.1: Percent of Projects Reporting Availability of Non-Even Start Educational Services in Their Communities (1996-97)

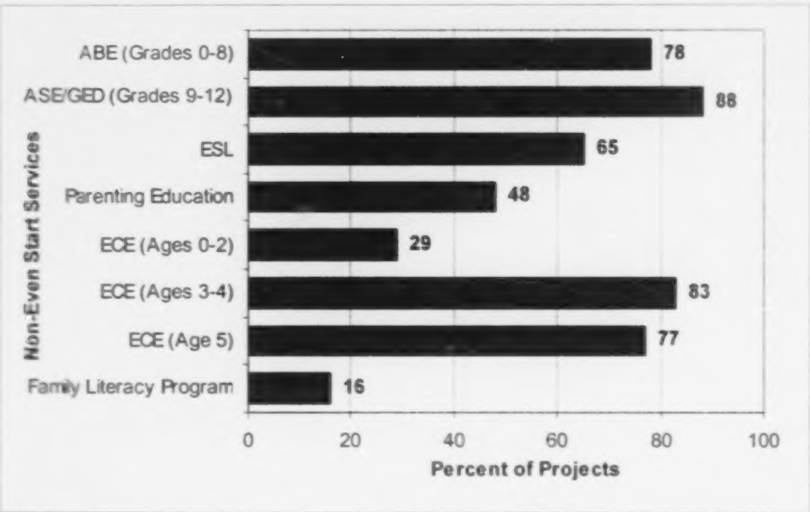


Exhibit reads: In 1996-97, 78 percent of Even Start projects reported that adult basic education (grades 0-8) was available in their communities outside of Even Start.

According to many project directors, even though numerous educational programs may be available in the community, families often lack knowledge of their existence or have transportation problems that prevent attendance. This is where Even Start projects' flexibility and ability to "glue" together existing services become most critical.

WHAT ORGANIZATIONS OPERATE THE EVEN START PROGRAM?

For program years 1991-92 through 1994-95, the law required that Even Start projects be operated by a local educational agency (LEA) in collaboration with a community-based organization (CBO) or other non-profit agency, or by a CBO or other non-profit agency in collaboration with an LEA. Since 1995-96, the 1994 reauthorization has required that the relationship between the collaborators be a formal "partnership."

Since 1992, approximately 80 percent of the LEA partners have been public school districts. For 83 percent of projects that submitted national evaluation data for 1996-97 the LEA partners were single school districts. The remaining LEA partners were school district cooperatives (4 percent), intermediate educational units (3 percent), or "other" organizational entities (10 percent).

The types of organizations serving as Even Start partners with the LEAs have also remained highly stable since 1992-93. In 1996-97, 23 percent of all reporting projects had local, county, or state government agency partners; postsecondary institutions and Head Start each were partners in 17 percent and 16 percent of projects, respectively (Appendix B, Exhibit B.5). Preschool or day care programs, trade schools, and volunteer groups each served as partners for 3 percent of projects.

Although public schools and government agencies represent a large portion of Even Start projects, the program as a whole includes a wide variety of organizations, both large and small, serving highly diverse target populations, and providing a wide array of educational and social services. This diversity among service providers is ideal for a national demonstration program.

HOW ARE EVEN START SERVICES FUNDED?

Federal grants represent the primary funding source for the vast majority of Even Start projects. Since 1992, all grants have been administered by the states except the federally-administered set-aside grants. In 1996-97, eighteen Migrant Education projects and eleven tribal projects received these set-aside grants. The U.S. Department of Education also directly administered five statewide family literacy initiative grants and one grant to a family literacy project in a prison that houses women and their preschool-aged children.

Federal Even Start grants are awarded for up to four years, after which a project has the option of reapplying to the program. (Under the current law, recipients are limited to a maximum of eight years of funding.) In 1996-97, 85 percent of the reporting projects were operating under four-year grants. Five percent of reporting projects had three-year grants; 3 percent had two-year grants, and 7 percent had one-year grants. Many projects had received more than one Even Start grant. Thus, based on data collected for the national evaluation, the project age (years of experience in operating Even Start) ranged from less than one year to eight years as shown in Exhibit 4.2.[53]

Exhibit 4.2: Project Age (Years of Operating Even Start) as of 1996-97

Project Age (Years of Operating Even Start)	Percent of Projects
Up to 1 year	18%
Two years	14%
Three years	13%
Four years	25%
Five years	9%
Six years	11%
Seven to eight years	10%

Exhibit reads: In 1996-97, 25 percent of projects were fourth-year projects.

For projects receiving multi-year grants, the portion of the total budget supported by non-Even Start ("local") matching funds (including in-kind contributions) is expected to increase by at least 10 percent each year. The local share must constitute at least 40 percent of their annual operating budgets by year four. For projects that receive grants after the fourth year, the local cost share must be at least 50 percent.

Exhibit 4.3 shows the sources of funding for Even Start projects operating in 1996-97. The average amount of federal Even Start funds for the first year of projects' current grants was $166,413, approximately $6,700 per project less than the amount reported in 1995-96 and more than $10,000 per project less than the amount reported in 1994-95. This may reflect, at least in part, the growing percentage of projects in their fifth or subsequent year that must obtain at least 50 percent of their budgets through non-federal funding sources. In 1996-97, roughly 30 percent of projects met this description.

---

[53] The percentage breakdown of project age is a close approximation since some projects indicated the first year of their first grant based on school years (as directed) while other projects responded in terms of calendar years.

Exhibit 4.3: Levels of Funding for Even Start Projects (1996-97)

Type of Funding	Average per Project	Range in 98% of Reporting Projects
Federal funding, first year of current grant	$166,413	$21,747-$472,614
1996-97 Funding		
Federal Even Start funds	$158,444	$41,500-$431,704
Non Even Start federal funds	$39,474	$10-$191,250
Local contributions	$115,960	$7,500-$527,185
Total resources	$250,267	$75,000-$714,286

Note: Different numbers of projects reported dollar figures for federal and local shares; as a result, the amounts displayed in each row do not sum to the total resources listed. Eighty-three projects reported having received non-Even Start federal funds; the remainder of projects either reported zero funds or skipped this question. The minimum reported, $10, may have been a data-entry error.

Exhibit reads: In 1996-97, the average amount of federal Even Start grants in the first year of current grant was $166,413 per project.

Based on data reported by 581 projects (91 percent of all projects in 1996-97), the average annual budget of Even Start projects in 1996-97 was $250,267, combining all available resources. This average budget was nearly $5,000 per project more than the previous program year. As was the case in previous program years, some projects had budgets that were substantially larger than the average amount.[54]

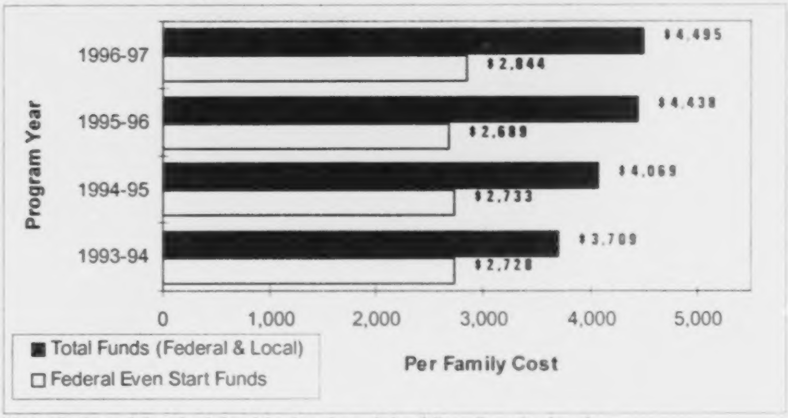
Exhibit 4.4 compares the Even Start program funds spent per family for 1993-94, 1994-95, 1995-96, and 1996-97. While the discussion above focused on resources available for each project, the per-family cost described below is based on the total program budget from all sources across all projects divided by the total number of families participating in all projects nationwide. With all types of funds combined (federal, state, and local), the amount that projects spent per family increased across four program years, from $3,709 in 1993-94 to $4,495 in 1996-97, an average increase of $786 per family. However, focusing only on the federal share, the dollar amount spent per family has remained relatively stable around $2,700 to $2,800 across these years.[55]

---

[54] Based on data from 550 projects (86 percent of all projects that operated in 1996-97), the average federal Even Start funds per project in 1996-97 totaled $158,444, nearly $5,000 less than the previous program year average (i.e., $163,712). Based on 551 reporting projects (86 percent), the average project in 1996-97 received $115,960 in local contributions, greater than the 1995-96 average of $108,718 and the 1994-95 average of $87,000. In addition, 83 projects also reported using other federal funds (e.g., Title I funds) averaging $39,474 per project as part of their local cost share for Even Start services.

These averages are based on different numbers of projects reporting less than complete data. Thus, the average increases and decreases in funds from different sources do not add to the average change in total resources from 1995-96 to 1996-97, and these data need to be interpreted with caution. The changes in average funding reported here do not account for economic inflation over this period.

Exhibit 4.4: Even Start Program Funds per Family per Year (1994-97)



Note: In this exhibit, the federal funds refer to federal Even Start funds only.

Exhibit reads:* *The federal Even Start funds averaged $2,844 per family in 1996-97.

The increase in the total resources available for each family may reflect, in part, a slight reduction in the average number of families served per project (from sixty in 1994-95 to fifty-five and fifty-six in 1995-96 and 1996-97, respectively) and an apparent increase in the amount of local contributions. Conversations with local project directors and state coordinators suggest that, in order to increase program effectiveness, many projects are devoting greater efforts and resources per family rather than increasing the number of program enrollees.

Another reason for the rise in per-family budget (from all sources) was an increasing percentage of projects receiving fourth and subsequent year grants and supporting at least 40 percent of their budget with "local" matching funds. In 1996-97, the average *federal Even Start funds* per family among projects with four or more years of funding was substantially lower ($2,523 per family) compared to the average for new grantees ($3,538 per family). However, because of the local share, the average *total funds* per family did not differ greatly according to project age—$4,604 for first-year projects, $4,550 for 2-3-year projects, and $4,450 for projects with four or more years of experience.

---

[55] The "average federal cost per family" can be calculated by two methods, depending on the type of information needed. The first method is to calculate the per-family federal cost for each project first and then to average the per-family costs from all projects. This method gives an equal weight to each project in calculating the programwide average, disregarding the fact that some projects with a large number of families may operate their programs at a lower per-family cost and smaller projects may spend a greater than average per-family cost. However, the benefit of this method is that it allows for comparing the differences in per-family federal cost among the projects.

The second method is to add the federal funds across all projects (total federal share), add the number of families served across all projects (total families), and divide the total federal share by the total number of families. The programwide per-family cost derived through this method takes into account the variations among projects. This is the method used to assess how the total federal funds across all projects are spent per family programwide in both previous Even Start evaluation reports and in this report.

HOW ARE THE EVEN START SERVICES STAFFED?

On average, an Even Start project in 1996-97 was staffed by ten persons whose salaries were paid by Even Start: one administrator, three to four instructors, one to two instructional aides, one family specialist, one support service provider, one evaluator, and one "other" staffer (Exhibit 4.5). The "average" staff composition of Even Start projects as a whole has not changed appreciably since 1994-95, although staffing patterns at individual projects vary widely.

Exhibit 4.5: Number of Even Start Paid Staff and Their Assignments (1996-97)

Staff	Average Across All Projects	Median	Range in 90% of Projects
Administrator	1.1	1	0-2
Instructor	3.5	3	1-7
Aide	1.8	1	0-4
Family specialist	1.4	1	0-3
Support service provider	1.1	0	0-3
Evaluator	0.8	1	0-1
Other	0.7	0	0-2
Total	10.3	9	4-17

Note: This exhibit includes staff who were paid totally or partially with Even Start funds. The numbers do not include staff who were paid solely with local matching or collaborating agency funds. In many Even Start projects, individual staff members perform multiple roles and functions. To avoid duplicating staff counts, project directors were asked to count each Even Start staff member only once, in his or her primary assignment area. Median is the number below which 50 percent of projects fall.

Exhibit reads:* *The average number of administrators paid by any federal Even Start funds was 1.1 per project in 1996-97.

To supplement their paid instructional staff resources, the typical Even Start project had six to seven volunteers: two in adult education; one to two in parenting education; and three to four in early childhood education. The typical Even Start project had nearly four volunteers and two paid instructors teaching early childhood education, indicating that projects allocated more of their own staff resources to this area than to adult and parenting education services. As discussed earlier in this chapter, educational programs for children younger than 3 years tended to be scarce in many Even Start communities. This places a greater responsibility on Even Start projects to provide staff resources for their infant and toddler programs.

In 1996-97, 51 percent of Even Start paid instructors had a bachelor's degree, and 24 percent had a master's degree (Exhibit 4.6). These percentages are virtually identical to those reported in three years prior, indicating overall that Even Start projects continue to be staffed by highly educated instructors.

The educational backgrounds of aides have also remained fairly consistent across four years. In 1996-97, the largest group of aides (73 percent) was educated at the high school level, including those who had received a GED. Twelve percent of aides had earned an associate's degree, and 9 percent had earned a bachelor's degree. In addition to their academic degrees, 34 percent of Even Start instructors and 22 percent of aides had received special teaching certifications or endorsements, including the Child Development Associates' (CDA) certificate.

In terms of work experience relevant to Even Start services, 26 percent of instructors and 8 percent of aides had more than 10 years of professional experience. However, for both teachers and aides, the largest category was one to five years of teaching experience (42 percent and 55 percent, respectively), mirroring the work history pattern reported in two prior years.

Exhibit 4.6: Academic Degrees and Years of Experience of Even Start Instructors and Aides (1996-97)

[illegible]	Percent of Instructors	Percent of Aides
Highest Level of Education Completed		
Did not complete HS diploma or GED	0%	4%
High school diploma or GED	14%	73%
AA	9%	12%
BA/BS	51%	9%
MA/MS/MEd	24%	1%
PhD/EdD	1%	0%
Special certification or endorsements (including CDA) relevant to Even Start instruction	34%	22%
Years of Experience		
Less than 1 year	6%	19%
1-5 years	42%	55%
6-10 years	26%	18%
More than 10 years	26%	8%

Note: The percentages represent the percentages of staff in each category, averaged across 603 projects in the 1996-97 evaluation.

Exhibit reads: In 1996-97, 14 percent of instructors who were paid by Even Start funds had only completed high school or had a GED.

WHAT INSERVICE TRAINING DO EVEN START STAFF RECEIVE?

Even Start projects are required to provide inservice training to build upon their staff's previous education and work experience. Even Start administrators received an average of eight days of inservice training during the 1996-97

BEST COPY AVAILABLE

program year; instructors and family specialists each received an average of seven inservice days; and aides received an average of five inservice days.

The inservice training that Even Start projects provided to most of their staff covered a wide range of topics that pertained to program coordination (Appendix B, Exhibit B.6). Continuing the same pattern from the previous two years, in 1996-97 about three-quarters of projects (76 percent) provided most of their staff with training in program planning or improvement, and 70 percent provided training in team building. In 50 percent to 57 percent of projects, most staff also received inservice training in recruitment, retention, home visits, and the local evaluation.

Somewhat fewer projects (14 percent to 37 percent) provided training to "most" of their staff in adult education areas. Of these, training in adult assessment was the most common, taught to most staff in 37 percent of projects.

Between 47 percent and 70 percent of projects provided most of their staff with training in four parenting education topic areas: parent and child activities; child rearing and child development; parent's role as a teacher; and life skills. More than 40 percent of projects provided inservice training to most of their staff in four topic areas related to early childhood education: child development; conducting child assessment; classroom or behavior management; and school readiness.

The greater emphasis placed on staff training in parenting and early childhood education topics, compared to adult education topics, may reflect:

- The relative scarcity of non-Even Start programs in the community providing family literacy, parenting education, and services for very young children; and
- The relatively limited role of collaborating agencies in providing Even Start parenting education and services for infants and toddlers (see Exhibit 4.7).

Finally, approximately one-third to one-half of projects trained most of their staff on adapting their educational programs to participants' needs and circumstances. The specific topics included: participants' family or personal problems (49 percent); participants' ethnic and cultural backgrounds (45 percent); family's educational needs (42 percent); and learners with special needs (30 percent).

Fifty-three percent of all reporting projects indicated that their staff had attended inservice sessions on topics other than those discussed above. Some additional inservice themes included: technology related topics such as computer, video, and Internet; health and safety issues, such as gang awareness and communicable diseases; and social problems of families, such as child abuse/neglect, substance abuse, single parenthood, and divorce.

TO WHAT EXTENT DO COLLABORATING AGENCIES PROVIDE THE CORE EDUCATIONAL SERVICES?

Even Start is often referred to as the "glue" that binds together existing services available from non-Even Start programs in the community to meet participants' diverse needs, to avoid duplication of services, and to maximize effective use of Even Start resources. The provision of instructional staff resources constitutes an important contribution to Even Start by collaborating agencies. How much of the Even Start educational services are provided by staff paid by Even Start funds, paid by agencies collaborating with Even Start, or staff paid by both sources?[56]

As shown in Exhibit 4.7, for approximately one-third of project sites, collaborating agencies were solely responsible for educational services in all levels of adult education; Even Start and collaborating agency staff shared responsibilities in about one-quarter of project sites. However, the pattern was quite different for parenting education—60 percent of project sites relied solely on Even Start staff to deliver services in this domain.

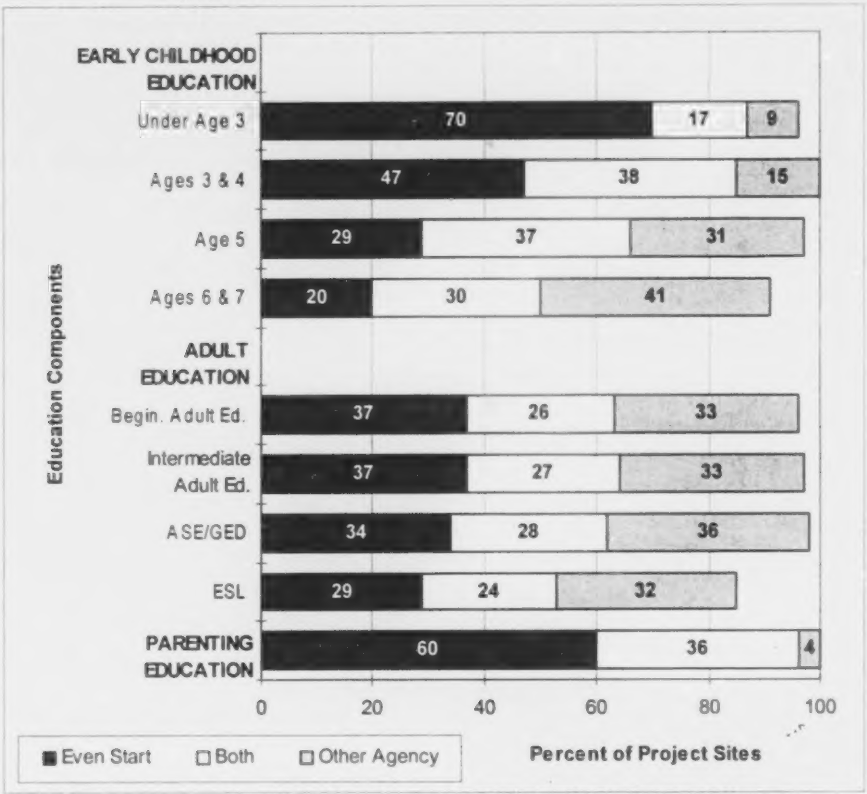
Yet another pattern of interagency collaboration was reported for different levels of early childhood education. Even Start resources were used exclusively for serving infants and toddlers in 70 percent of project sites, while collaborating agencies played a greater role in serving older children. Forty-one percent of project sites relied upon collaborating agencies as sole providers of Even Start educational services for 6- to 7-year-old children.

Interagency collaboration is one of the key elements strongly emphasized in the Even Start legislation, and projects are succeeding in developing a wide network of collaborative arrangements. While Even Start staff are responsible to varying degrees for the delivery of services in all educational components, in many communities a variety of agencies and organizations collaborate with Even Start projects—either as the primary provider of specific services or to augment services provided largely by Even Start projects.

---

[56] Project instructors were considered as Even Start staff if any portion of their salaries was paid with Even Start funds.

Exhibit 4.7: **Percent of Project Sites Coordinating Services with Collaborating Agencies, by Educational Service Area (1996-97)**



Note: The percentages are based on 655 project sites reported by 605 projects included in the 1996-97 evaluation. Some percentages do not add to 100 because some project sites did not provide certain types of services (i.e., neither Even Start nor other agency staff provided the services).

***Exhibit reads:** In 1996-97, 37 percent of project sites used Even Start staff exclusively for their beginning adult basic education services.*

Public school departments (other than the specific departments sponsoring Even Start) and colleges and universities served as primary providers of adult education services for 34 percent and 21 percent of project sites, respectively (Exhibit 4.8). For many project sites, Even Start was the primary source of adult education services, supplemented by staff from agencies such as volunteer groups (52 percent of project sites), community groups (46 percent), and government agencies (38 percent).

BEST COPY AVAILABLE

Exhibit 4.8: Percent of Project Sites Where Collaborating Agencies Were the Primary or Secondary Providers of Adult, Parenting, and Early Childhood Education (ECE) Services (1996-97)

	Adult Educ.		Parenting Educ.		ECE	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
Public schools	34%	34%	16%	51%	33%	49%
Colleges/ universities	21%	36%	5%	30%	5%	20%
Volunteer groups	5%	52%	3%	42%	4%	42%
Other community groups	6%	46%	7%	59%	3%	48%
Government agencies	10%	38%	7%	51%	7%	34%
Technical schools	8%	30%	2%	14%	2%	8%
Head Start	3%	20%	5%	50%	25%	51%
Other preschool, daycare programs	2%	10%	3%	29%	18%	48%
Foundations, associations	1%	14%	2%	16%	1%	14%

Note: The type of collaborating agencies that were reported as primary or secondary service providers by more than 50 percent of project sites are indicated by shaded boxes.

Exhibit reads:* *In 1996-97, 34 percent of project sites had collaborative arrangements with public school systems that were the primary providers of adult education instruction for their Even Start parents.

In contrast, relatively few collaborating agencies served as primary providers of parenting education, with the exception of public school departments (16 percent). However, various types of organizations contributed parenting education services as secondary providers: community groups (59 percent), public school departments (51 percent), government agencies (51 percent), and Head Start (50 percent). Volunteer groups provided supplemental parenting education services to 42 percent of project sites.

Early childhood education also was supported primarily by Even Start staff, although some projects relied on instructors from public school departments (33 percent), Head Start (25 percent), and other preschool and daycare programs (18 percent) as primary service providers. These three provider groups also comprised the largest percentages of secondary providers of early childhood education, among which Head Start was the single largest secondary provider (51 percent).

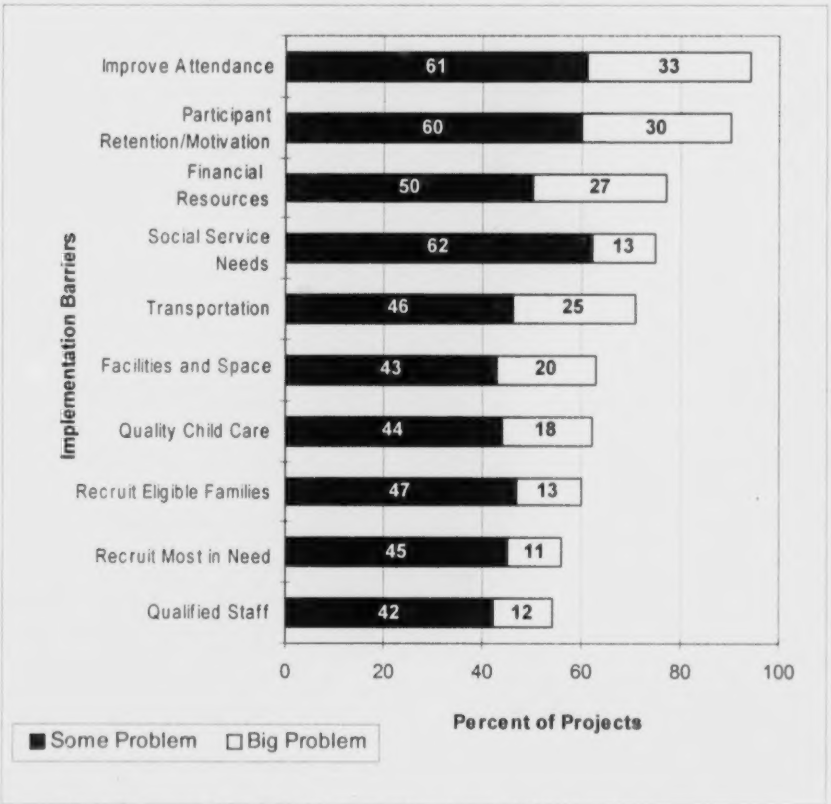
Even Start projects varied widely in their configurations of instructional resources. Typically, projects had three or four instructors who were paid by Even Start funds (Appendix B, Exhibit B.7). In addition, on average, two instructors per project were paid by local matching funds, and another one to two instructors were paid by collaborating agencies for a total of seven to eight instructors from all sources. However, the number of instructors provided by local match and collaborating agencies varied substantially across all projects.

Project directors' satisfaction ratings of their collaborative arrangements have remained consistently high since 1993-94. In 1995-96, nearly all project sites (97 percent) reported that "all" or "many" of their collaborating relationships were satisfactory.

WHAT ARE MAJOR CHALLENGES IN IMPLEMENTING EVEN START?

Projects were asked to indicate the extent of problems they experienced in terms of ten potential barriers to program implementation. Exhibit 4.9 lists the ten potential barriers and whether each presented a "big" problem or "some" problem to projects.

Exhibit 4.9: Percent of Projects Reporting Barriers to Program Implementation (1996-97)



Note: The percentages are based on 605 projects included in the 1996-97 evaluation

Exhibit reads: In 1996-97, 33 percent of Even Start projects reported that improving attendance presented big problems in program implementation.

Four issues were "big problems" for one-fourth or more of projects: improving attendance; improving participants' retention or motivation; obtaining sufficient financial resources; and obtaining adequate transportation. These four issues have consistently been among the most difficult problems cited every year since

BEST COPY AVAILABLE

1993-94. Projects are meeting the mandate to recruit and serve very needy families. If the extent of participant need increases, the problems of maintaining motivation, retention, and providing support services are likely to continue, and possibly increase.[57]

For each implementation barrier, we asked the projects to report successful solutions they had utilized. Exhibit B.8 in Appendix B lists the innovative and/or frequently mentioned solutions; these solutions repeat, in large measure, the solutions cited in previous years. Solutions for four issues that presented major problems to many projects are summarized in the following paragraphs:

- **Improving participants' retention and motivation.** Thirty-four percent of projects reported solutions to counteract poor retention and poor motivation among participants. These included: offering families incentives such as field trips, family nights, and merchandise certificates; using letters, phone calls, and home visits to maintain personal contact and to follow up on absences; providing/arranging for social services, transportation and child care to enable more parents to attend; involving parents in planning activities and in parent advisory boards; improving applicant screening; maximizing flexibility of service schedules; encouraging peer support and "buddy" systems among parents; and offering more vocational topics and activities in adult education programs.

- **Improving attendance.** Thirty-three percent of projects reported solutions that they had implemented to improve participants' attendance. There was considerable overlap with the solutions reported for improving motivation.

- **Obtaining sufficient financial resources.** Although securing sufficient financial resources was the third major problem cited, only 16 percent of projects reported solutions to this problem. Those that did report solutions in this area primarily wrote grants to obtain funds to supplement their Even Start grants and obtained monetary and in-kind contributions from local businesses and collaborative partners.

- **Transportation.** Twenty-two percent of projects reported solutions for coping with transportation problems. Solutions included: subsidizing transportation costs for families that have cars; encouraging car pooling among students; purchasing or renting a van to transport families; using public transportation; arranging for families to ride public school buses; having staff use their own cars to transport families; sharing vehicles and transportation costs with other programs; redesigning transportation routes and/or relocating classes; and offering more home-based services.

---

[57] Projects were asked to describe problems they encountered in *implementing* various aspects of their services. However, to the extent that some of these "features" are legislatively required program elements (e.g., recruiting families most in need, providing support services to enable families to participate), the responses could be interpreted as indicators of statutory/programmatic barriers projects experienced. In that case, recruiting eligible, most-in-need families does not appear to be a problem for most projects, while providing a wide range of support services and retaining these families may be.

WHAT ARE PROJECTS' TECHNICAL ASSISTANCE NEEDS?

In addition to reporting the barriers to implementation and any solutions that they had implemented, project directors were asked to describe the extent of their need for technical assistance. In the context of educational services, improving participants' retention emerged once again as the area for which the largest percentage of projects (77 percent) reported at least some need for technical assistance (Exhibit 4.10). Computer assistance followed closely, cited as an area of at least some need by 72 percent of projects.

Exhibit 4.10: Projects' Need for Technical Assistance: Educational Services (1996-97)

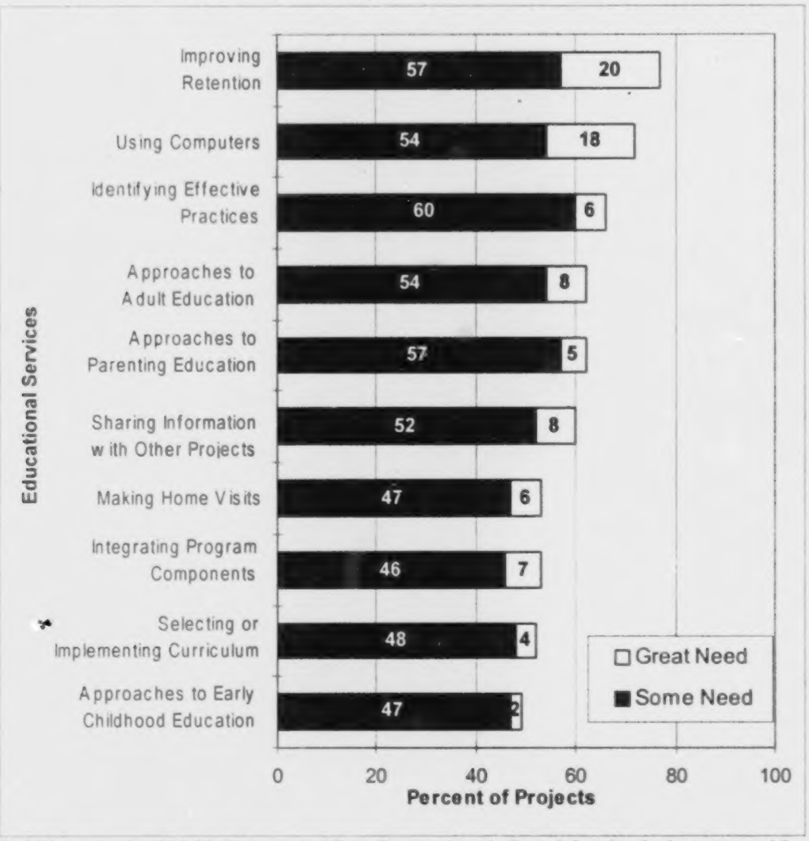


Exhibit reads: In 1996-97, 20 percent of Even Start projects indicated that they had a great need for technical assistance in the area of improving retention.

In the area of support services, meeting the transportation needs of participants continued to be an issue for which projects needed a great deal of technical assistance (16 percent, Exhibit 4.11).

Exhibit 4.11: Projects' Need for Technical Assistance: Support Services (1996-97)

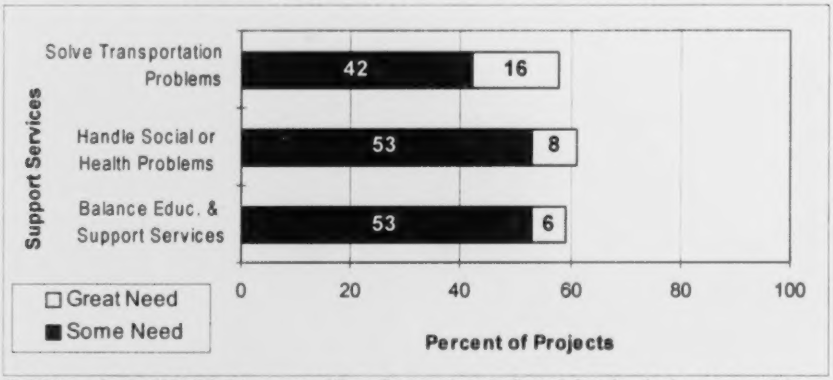


Exhibit reads: In 1996-97, 16 percent of Even Start projects indicated that they had a great need for technical assistance regarding transportation problems.

Roughly one-fifth of projects indicated a great need for technical assistance in two areas related to program operations: funding and fiscal issues (21 percent), and increasing participant involvement and retention (20 percent, Exhibit 4.12).

Exhibit 4.12: Projects' Need for Technical Assistance: Program Operation Issues (1996-97)

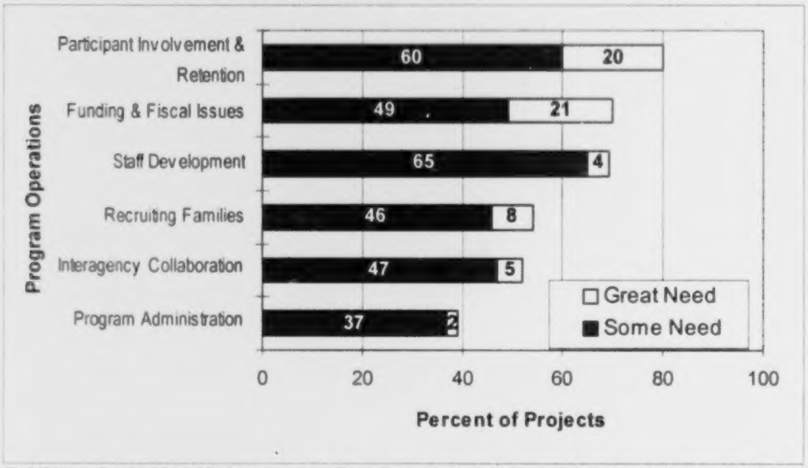


Exhibit reads: In 1996-97, 20 percent of Even Start projects indicated that they had great need for technical assistance in the area of increasing participant involvement and retention.

Some projects described, in written comments, additional areas needing technical assistance. They included: identifying appropriate assessment instruments; working with learning-disabled adults; retaining and helping families with incest or substance abuse problems; helping adults transition to the workforce; disseminating program models to newer Even Start grantees; forming collaborative relationships with other Even Start projects; and collecting qualitative assessment data.

BEST COPY AVAILABLE

Generally, projects reported some need for assistance in various areas although there were only a few areas where a sizable portion (about one-fifth) of projects expressed a great need for assistance: participant motivation, retention, and fiscal issues. Given the legislative mandate to serve families most in need and the prevalence of needy families in relation to funding constraints, these issues present difficult challenges for providers of technical assistance.

WHAT ARE PROJECTS' EVALUATION ACTIVITIES AND PLANS FOR CONTINUATION AFTER THE CURRENT GRANT EXPIRES?

The Even Start legislation requires each local project to arrange for a local evaluation of the project by an independent evaluator. Given the diversity of program design and service delivery approaches, each project is best suited to assess its implementation progress and effectiveness in relation to its specific program goals. Local evaluations produce information that is directly applicable to ongoing efforts in project improvement.

Ninety-six percent of the 592 projects that submitted data to the national evaluation in 1996-97 reported conducting local evaluations. As was the case in the previous three years, nearly all local evaluations reported including an assessment of: participant growth in child and adult literacy and in parenting skills (93 percent); status of implementing their proposed program components (95 percent); detailed descriptions of their participants, program services, and interagency collaborations (94 percent); and assessments of the quality of the educational and support services they provide (91 percent). Fewer projects (69 percent) evaluated the quality of their staff training and development.

Eighty-eight percent of Even Start projects planned to continue their programs after their current grant expires (see top of Exhibit 4.13). Among projects that were in their first four years of Even Start grant and thus eligible to apply for another four-year grant, 90 percent planned to continue providing family literacy services after the current Even Start grant expires. Ninety percent of this group planned to apply for another federal Even Start grant.

Among projects with five or more years of Even Start experience and not eligible for federal Even Start funds after eight years, 82 percent planned to continue services after the current federal grant expires. Of this group, 72 percent indicated plans to reapply for federal Even Start funds. This would be possible if they apply to implement a demonstration project that is substantially different (in target population, program design, etc.) from their current program.

Across all projects that planned to continue services after the completion of their current grants, 38 percent planned to seek funds from various combinations of local sources, foundations, corporations, and other organizations in addition to federal Even Start grants; however, 15 percent expected to do so without federal Even Start funds.

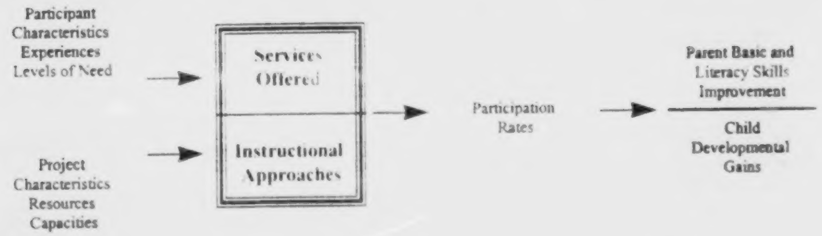
Exhibit 4.13: Plans for Continuation After Current Multi-Year Grant Expires (1996-97)

Program Continuation Plans	Number of Projects	Percent of Projects
Plan to continue	525	88%
Have no plans yet	53	9%
Plan to close the project	18	3%
Strategies for continuing the program		
Reapply for another Even Start demonstration grant	446	74%
Obtain funding from foundations, corporations, or other sources	357	59%
Carry on with local funds	317	53%
Other	76	13%

Note: Because projects could indicate more than one strategy, the percentages add to more than 100.

***Exhibit reads:* In 1996-97, 88 percent of Even Start projects planned to continue to provide Even Start services after the current grant expires.**

CHAPTER 5: WHAT SERVICES DO EVEN START PROJECTS PROVIDE TO PARTICIPANTS?


Participant Characteristics
Experiences
Levels of Need
Project Characteristics
Resources
Capacities
Services Offered
Instructional Approaches
Participation Rates
Parent Basic and Literacy Skills Improvement
Child Developmental Gains

Even Start projects are required to recruit families most in need of services and to provide high-quality, intensive educational programs consisting of three core components: adult basic education or adult literacy, parenting education, and early childhood education. To the extent that the three components are integrated, Even Start is intended to provide "value-added" curricula. Projects must provide some services in the families' homes and through parent-child joint activities. Projects also must include support services such as transportation and child care and design sufficient flexibility in schedules to minimize barriers to families attending the educational activities. This chapter examines the extent to which Even Start projects achieve the intended program design and approach.

HOW ARE FAMILIES RECRUITED AND SCREENED?

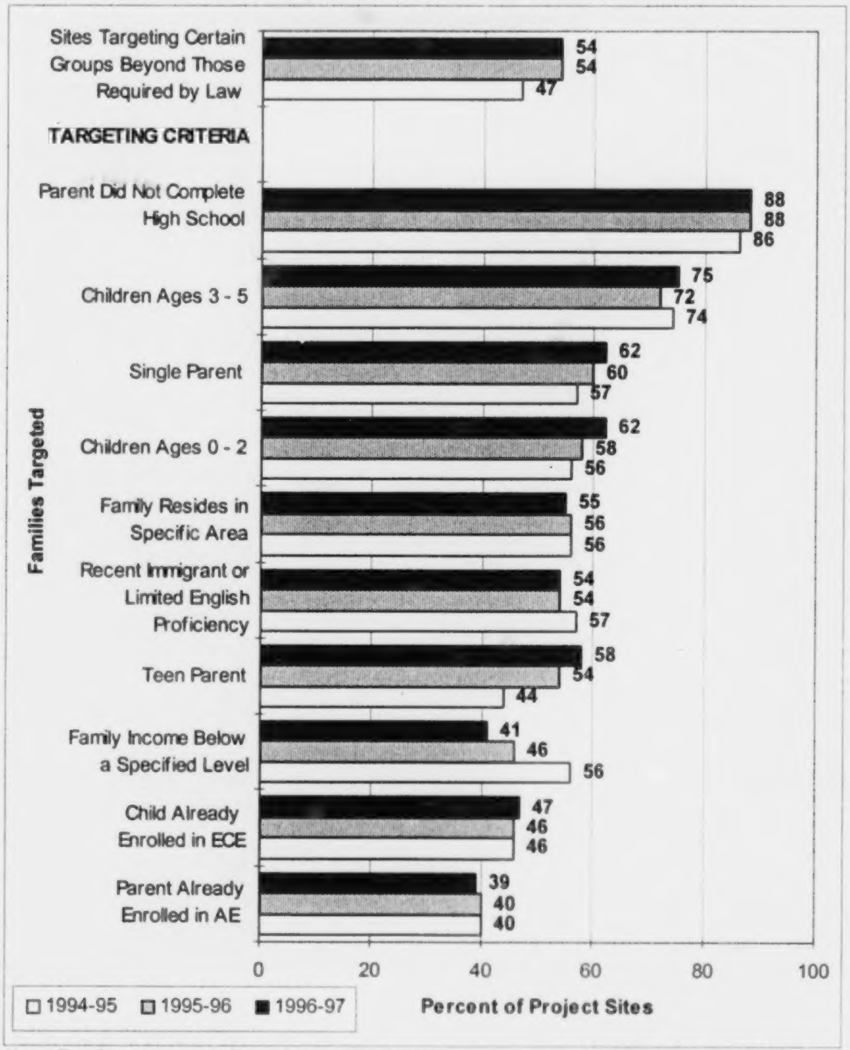
To qualify for services, a family must have at least one parent who is eligible for adult education under the Adult Education Act or who is within the state's compulsory school attendance age range (as long as a local educational agency provides the basic education component) and at least one child age seven or younger. Even Start projects are required to screen applicant families to ensure that they meet these eligibility requirements stated in the Even Start statute. Further, the projects are required to recruit and serve families who are *most in need* of Even Start services in their respective communities. Instead of relying on uniform standards for assessing families' need for services, each Even Start project is expected to develop recruitment and screening approaches that can effectively identify families most in need of the type of services offered by the project.

Exhibit 5.1 shows the percentages of project sites that use various screening criteria to recruit families with certain characteristics. Some targeting criteria are intended to identify families most in need (e.g., families with incomes below a specified level). Other criteria are related to individual projects' program

BEST COPY AVAILABLE

designs (e.g., families with children already enrolled in early childhood education programs).

Exhibit 5.1: Criteria for Targeting Services to a Segment of the Eligible Population (1994-95, 1995-96, and 1996-97)



Note: For the percentages of sites that used special targeting strategies (at the top of the exhibit), the 1994-95, 1995-96, and 1996-97 percentages are based on 613, 635, and 651 project sites, respectively. The percentages of project sites targeting special groups of eligible families are based on 248, 332, and 351 project sites that used additional criteria in recruiting families in 1994-95, 1995-96, and 1996-97, respectively. The targeting criteria required by law refer to eligibility requirements under the Adult Education Act or adult age within the state's compulsory school attendance age range, and the presence of at least one child under age 8 in the family.

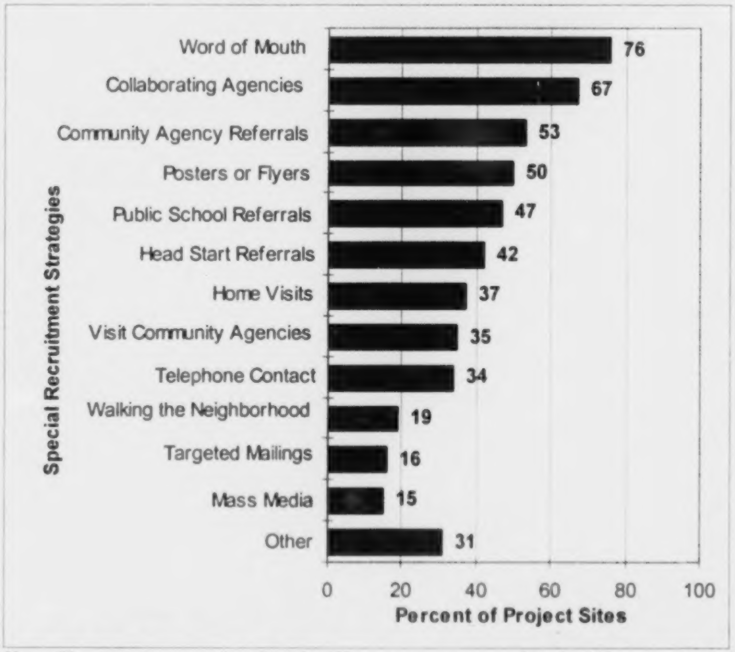
Exhibit reads:** **Among Even Start project sites that used additional criteria for recruiting families in 1995-96 and 1996-97, 88 percent targeted families with parents who had not completed high school.

In 1995-96 and 1996-97 a somewhat higher percentage (54 percent) of projects than in 1994-95 (47 percent) used criteria beyond those specified by Even Start legislation to recruit families. Across the three program years, the vast majority of project sites that employed additional recruitment criteria targeted parents with no high school diplomas (86 percent to 88 percent) and families with children ages 3 to 5 (72 percent to 75 percent). The largest increase in the three years occurred in the percentage of project sites that targeted families with teen parents—from 44 percent to 58 percent—reflecting a legislative change in 1995-96 that made more teen parents eligible to participate in Even Start. Since 1994-95, the percentage of sites that use family income as a means to target families decreased from 56 percent to 41 percent. This may be due to the fact that most applicants are from very low-income families, obviating the need for specifically targeting poor families.

In addition to the ten criteria listed in Exhibit 5.1, a number of projects used additional criteria to select families most in need. The additional criteria included: parents receiving some form of public assistance; parents who were not employed; families that had one or more children with special needs; families with multiple children younger than 8 years; and families that were homeless or had a history of domestic violence.

Throughout Even Start's program history, word of mouth was the most commonly used recruitment strategy for at least three-quarters of projects (Exhibit 5.2).

Exhibit 5.2: Percent of Project Sites Using Special Recruitment Strategies "a Great Deal" (1996-97)



Note: The percentages are based on the 655 project sites operated by the 605 projects included in evaluation analyses.

Exhibit reads: In 1996-97, 76 percent of project sites used word of mouth "a great deal" for recruiting families.

Referrals through collaborating agencies and other community agencies were also used by a majority of project sites. In addition to these common methods, the 1995-96 data indicated that projects with several years of Even Start experience used methods that target individual families (e.g., home visits, telephone contacts, and walking the neighborhood) more than first-year projects did. The 1996-97 data produced complementary findings: first-year projects used methods that reach many potential participants (e.g., mass mailing, mass media, posters and flyers, and making presentations in community agencies) more than projects with four or more years of experience did.

Even Start projects need to screen all applicants to verify that families meet the basic mandated eligibility criteria and to further assess family circumstances, educational needs, and potential barriers to participation. In fact, 82 percent of the reporting project sites used eligibility verification as a screening procedure "a great deal" in 1995-96 and 1996-97 (Exhibit 5.3).

Exhibit 5.3: Percent of Project Sites, by Formal Steps Used "a Great Deal" in Screening Potential Participants (1996-97)

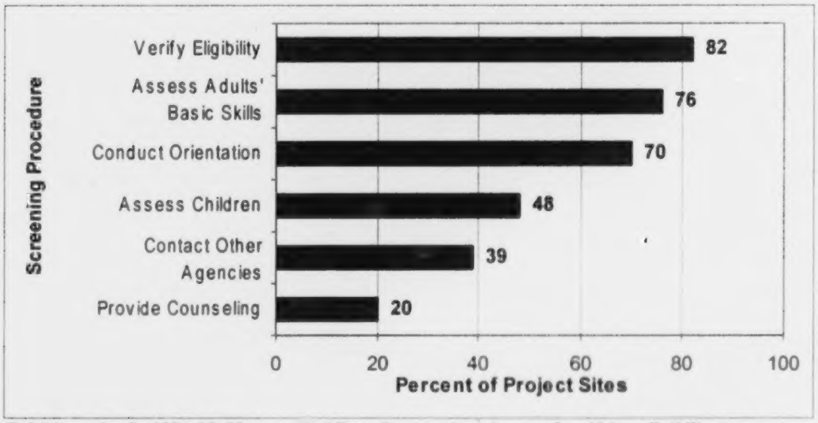


***Exhibit reads:** In 1996-97, 82 percent of Even Start project sites used verifying eligibility "a great deal" as a screening procedure.*

From 1994-95 on, the use of additional screening procedures has been consistent. In addition to verifying eligibility, the screening procedures most frequently used "a great deal" included assessment of adults' basic skills (76 percent of sites) and conducting orientations (70 percent of sites). Assessment of children's school readiness and language development was used "a great deal" by less than half of the sites, perhaps because projects can place children into educational levels according to their age, whereas there are no such guidelines for adults, necessitating the use of more formal assessment.

HOW MANY INSTRUCTIONAL HOURS ARE OFFERED BY EVEN START?

A critical element of any educational program is the service intensity.[58] Intensity refers to at least two aspects of instructional curricula—amount and quality of services. While it is difficult to capture the qualitative aspects of Even Start educational activities across nearly 650 projects, the amount of instructional hours that projects offer has been tracked since the first year of the national evaluation. Admittedly, the number of hours alone reveals little about the quality of what is taught, how it is taught, and how well it is taught. However, analyses from the previous years have shown positive relationships between "hours offered" and key participation measures.[59]

For each instructional area, projects reported the scheduled instructional time offered to a typical participant according to the following breakdown:

- Times per month;
- Hours per month;
- Duration of instruction in months; and
- Hours per month of home-based instruction.[60]

INCREASES SINCE 1992-93

Exhibit 5.4 displays the average hours per year of adult education and parenting education services offered since 1993-94. For all levels of adult education, the contact hours offered increased substantially.[61] The average increases from 1993-94 to 1996-97 ranged from thirty-five to ninety-two hours per year, depending on educational levels.[62]

---

[58] In April 1996, the Even Start statute was amended to require high-quality, *intensive* instructional programs. This requirement became effective for projects in program year 1996-97.

[59] Instructional hours could include services provided directly by Even Start staff and by collaborating agencies. In projects where the three core components are well-integrated, a given activity or lesson could serve multiple objectives (e.g., adult education and parenting education). Projects were instructed to double count the same hours if the activities conducted during those hours meet the objectives of more than one educational component. This method of reporting captures fully the amount of services provided *for each service area*. However, in projects where core services are well-integrated, combining the same instructional hours that are "double counted" for all three components would incorrectly inflate the total hours of services offered to a typical family. Thus, the hours of services offered to a typical family are presented for each service area separately and should not be combined to represent the total hours of services offered to typical families across all service areas.

[60] Detailed data on hours of services offered for each level of adult, parenting, and early childhood education areas are presented in Appendix B, Exhibit B.9.

Exhibit 5.4: Hours of Instructional Services Offered per Year per Participant in Adult and Parenting Education (1993-94 to 1996-97)

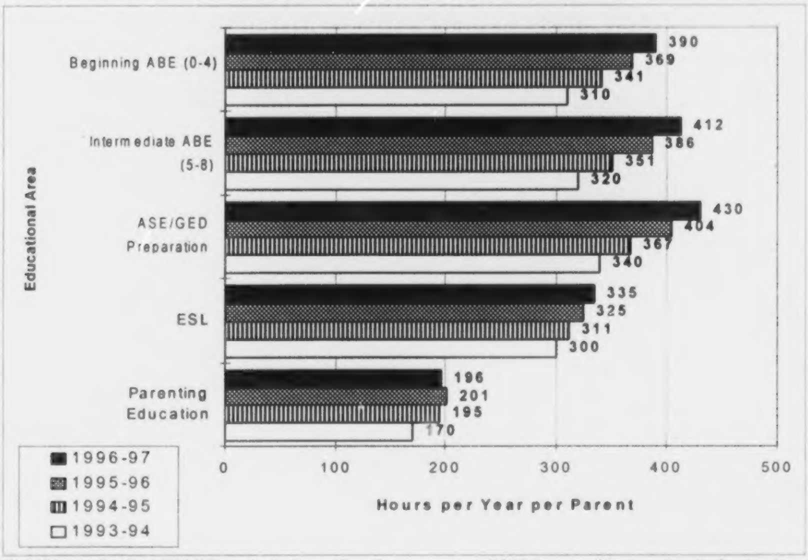


Exhibit reads: In 1996-97, project sites offered an average of 390 hours of instruction in beginning adult basic education.

On average, Even Start parenting education involves substantially fewer hours than either adult or early childhood education. The average number of parenting education hours that projects provide increased by twenty-five hours between 1993-94 and 1994-95; however, this intensity level—around 200 hours—has remained relatively stable for the past three years. This stability contrasts with the steady yearly increases in service intensity in all other service areas.

---

[61] All averages are based on the projects that reported at least one hour of service in each component. For the national summary analyses reported here, "hours per year" was used as a measure of service intensity since it would account for the widely divergent "hours per month" and "months per year" across all projects.

On average, projects offered services for ten months. (Although Even Start services are expected to be available year-round, some projects provide the core educational services on a ten-month academic calendar and enrichment activities during the summer months.) However, some program designs are intended to regularly serve seasonal participants (e.g., the eighteen Migrant Education projects operating in 1996-97). For such projects, the "hours per year" measure could underrepresent service intensity. Recognizing this potential problem, we nevertheless used the global measure of "hours offered per year" to describe the Even Start program nationwide and for comparisons with results from previous years.

[62] The yearly comparisons are based on data collected during the second evaluation using the same data collection instrument and instructions. However, findings from the first evaluation (St.Pierre et al., 1995) suggest that the gradual increases date back to the earliest years of the Even Start program.

Instructional hours for early childhood education have increased substantially since 1993-94 (Exhibit 5.5). The hours of educational activities for infants and toddlers under age 3 rose from an annual average of 280 hours in 1993-94 to 406 hours in 1996-97. This amounts to an increase of ten to eleven hours per month. The number of project sites offering services to infants and toddlers also increased from 71 percent in 1994-95 to 84 percent in 1996-97 (not shown in the exhibit). Thus, projects are accommodating the increased enrollment of infants and toddlers by expanding services for this age group—both in terms of availability as well as intensity. This also suggests that more children are benefiting from the Even Start services (e.g., early childhood education, parenting education services for their parents, early intervention services) from an earlier age than was common in previous years.

Exhibit 5.5: Hours of Instructional Services Offered per Year per Participant in Early Childhood Education (1993-94 to 1996-97)

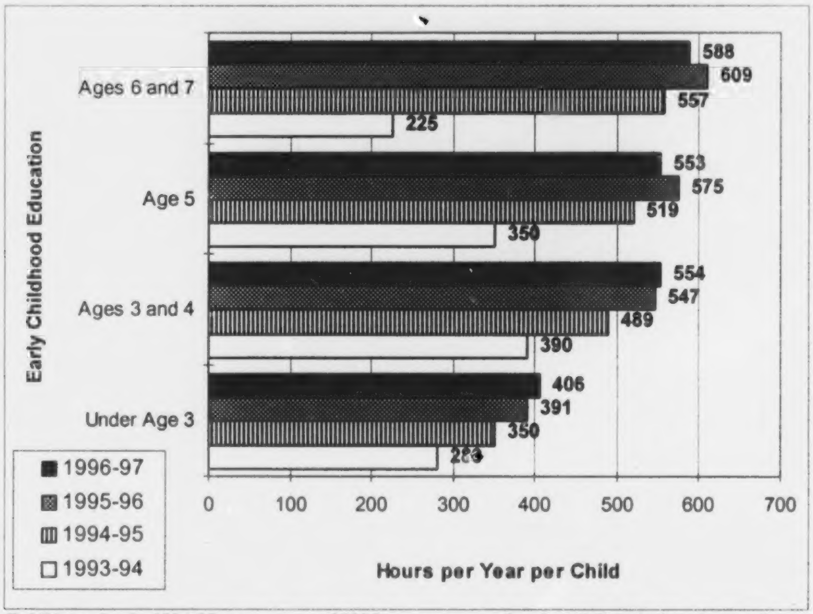


Exhibit reads: In 1996-97, an average of 588 hours per year of early childhood education services was offered to children ages 6 and 7.

Contact hours for educational services for children ages 6 and 7 more than doubled between 1993-94 and 1994-95. At least some of this increase may be due to factors other than programmatic changes. For instance, the leap from 225 hours to 557 hours may be related to the 1995 legislative change that allowed projects to report Title I program services as part of their local cost share. This accounting change may have encouraged projects to report more fully the school activities that can be counted as part of Even Start services (i.e., if they are coordinated with the overall Even Start services). Again, it should be noted that these are the contact hours projects offered to participants, not the actual hours of participation.

Overall, the increases in the hours of early childhood education were particularly steep between 1993-94 and 1994-95, ranging from seventy to 332 hours per year of increases, and continuing into 1995-96. In 1995-96, the large number of projects that entered in 1993-94 (the beginning of the second four-year program cycle) reached their third year of operation. That year, nearly 40 percent of all projects were three to four years old and another 30 percent had five or more years of experience. (As we will discuss shortly, project age influenced the number of service hours offered.)

The rate of increase in the hours of early childhood education slowed between 1995-96 and 1996-97. In fact, for 5-year-olds and school-aged children, the average hours offered declined by twenty-one to twenty-two hours. Estimating on the basis of a ten-month school program, the services offered to children in 1996-97 amounted to roughly four hours a day, three days a week for children aged 3 to 5 years. Similar to the pattern seen with parenting education, the Even Start early childhood education program as a whole may stabilize at this level. Of course, there are enormous variations in the amount of services offered across projects. As we discuss in Chapters 6 and 8, projects that offer more intensive educational services tend to reap higher participation rates (see Chapter 6) and possibly greater educational gains (see Chapter 8).

HOME-BASED VERSUS CENTER-BASED SERVICES

Most Even Start projects provide "center-based services"—instructional activities conducted in classrooms and other types of centralized facilities. However, some projects offer primarily "home-based services," which involve Even Start staff conducting highly individualized instructional activities in participants' homes.[63] Home-based services may be particularly suitable for projects located in remote rural areas where the participating families are geographically dispersed and access to transportation is constrained by availability and/or cost. However, even in more urban areas, projects may choose this mode of service to ensure that participants receive highly individualized services that are closely tailored to each family's needs and home circumstances.

The extent of home-based instructional activities was stable between 1992-93 and 1996-97 for adult and parenting education. The prevalence of home-based early childhood education increased during the five-year period. This trend may reflect the rising enrollment of infants and toddlers and the relative scarcity of existing center-based educational programs available for this age group.

---

[63] All projects are required to provide some home-based instructional services to each participating family.

Within a given project, the prevalence of home-based activities varied by the educational service area. For instance, a project's adult education program may focus on GED preparation classes conducted in a high school or community college, while parenting education and a large portion of early childhood education may be conducted in participants' homes. Regardless of service area, few projects provided a large portion of instruction in participants' homes.

In 1996-97, 14 percent of projects offered 40 percent or more of adult education hours in the home setting. Thirty percent of projects offered this level of home-based parenting education; 27 percent of projects offered this level of early childhood education in the home. For analysis purposes, we averaged the percentages of home-based adult, parenting, and early childhood education hours and labeled projects that reported 40 percent or more of their total educational services in home settings as home-based.[64] Only 17 percent of projects met this description. Home-based projects, thus defined, were somewhat more prevalent in rural areas (23 percent). However, some of these projects were found in urban and "mixed" communities (13 percent and 8 percent, respectively).

VARIATIONS IN THE AMOUNT OF SERVICES OFFERED TO FAMILIES

The wide variation in the educational service hours that individual projects offer begs the question: what project and participant characteristics influence program intensity? Based on previous years' data, we expected that projects with several years of experience in operating Even Start would tend to offer more instructional hours than less mature projects. We also anticipated that center-based projects would offer more instructional hours than home-based projects.

---

[64] We first computed the ratio of hours offered in a home setting to the total hours offered for each instructional level (i.e., four levels of adult education including ESL, two levels of parenting education, and four levels of early childhood education). Second, within each component (i.e., adult, parenting, or early childhood education), if any of the ratios of home-based hours were 40 percent or higher, we coded that component as "home-based." Thus, a project could be coded as providing "home-based adult education," "home-based parenting education," and/or "home-based early childhood education." As the final step in globally characterizing each project as primarily home-based versus center-based, we computed a mean ratio across the three ratios—home-based adult education, home-based parenting education, and home-based early childhood education hours.

The choice of 40-percent criterion partly reflects a practical concern to have a sufficient number of projects for analysis. Choosing a much higher percentage would have excluded nearly all projects from the "home-based" services analysis.

Using multiple regression to examine the 1996-97 data, we examined the relationship between hours of adult education services offered per month and the following project characteristics, each of which could potentially affect the amount of services projects offer:[65]

- Urban versus rural service area;
- Project age (years of experience in operating Even Start);
- Number of families served in 1996-97;
- Ratio of instructional hours offered that are home-based;
- Total project funds for 1996-97;
- Number of Even Start paid staff;
- Ratio of instructors with college degrees or higher education;
- Ratio of instructors with five or more years of relevant experience;
- Ratio of families in which the participating parent has limited English proficiency;
- Ratio of families headed by teen parents; and
- Ratio of very needy families—those who have four or more of the seven need indices (described in Chapter 3).

Not surprisingly, projects with larger budgets offered more hours of adult education. Also as expected, center-based projects typically provided more hours of adult education than did home-based projects. Further analysis (using the analysis of variance method) indicated that "home-based projects" (as defined by the method described in the footnote above) offered an average of eighteen hours of adult education per month compared to an average of thirty-four hours among mainly center-based projects (Exhibit 5.6).

---

[65] Detailed explanations of the dependent and independent measures entered in the regression analyses and the analysis results are provided in Appendix C. All results discussed in this report were statistically significant, unless otherwise noted.

Exhibit 5.6: **Average Hours of Adult Education Offered per Month, by Home- vs. Center-based Services and Percent of Teen Parents (1996-97)**

Project and Participant Characteristics	Average Hours of Adult Education Offered per Month
Home- vs Center-based	
Primarily home-based projects (N=105)	18
Primarily center-based projects (N=507)	34
Percent of Teen Parents	
Less than 3 percent (N=147)	25
3-9 percent (N=160)	30
10-20 percent (N=175)	32
More than 20 percent (N=160)	35

Note: The results are based on analysis of variance. "Primarily home-based projects" offered 40 percent or more of instructional services in the home setting; "primarily center-based projects" offered less than 40 percent of home-based instruction.

***Exhibit reads:** In 1996-97, primarily home-based projects offered an average of eighteen hours of adult education per month, while primarily center-based projects offered thirty-four hours per month.*

In terms of participant characteristics, projects with higher percentages of teen parents offered more adult education hours. This is not surprising because high school instructional hours can be reported as Even Start adult education hours for this evaluation. Exhibit 5.6 shows that projects in which less than 3 percent of parents were teens offered an average of twenty-five hours of adult education per month, compared with nearly thirty-five hours offered in projects where more than 20 percent of parents were under age 20. Finally, projects serving higher percentages of very needy families (with four or more of the seven needs discussed in Chapter 3) offered more hours of adult education. For every 10 percent increase in the proportion of very needy families served (holding constant the influence of other factors) the adult education hours offered per month increased an average of 12.26 hours (Appendix C, Exhibit C.3).

Projects were more uniform in the parenting education hours they offered. (This uniformity may be due, in part, to the relatively small range of parenting hours offered compared to adult education hours.) Neither project age, project budget, nor any of the staff characteristics were significantly related to this aspect of service intensity (Appendix C, Exhibit C.4).

However, two factors were clearly related to variations in parenting education: home- versus center-based project design and the prevalence of very needy families. Projects that provided 40 percent or more of instructional services in the home setting offered an average of twelve hours of parenting education per month, compared to twenty-one hours among projects that were more center-based (Exhibit 5.7). Projects in which more than 55 percent of families were very needy offered twenty-four hours of parenting education services per month, compared to eighteen hours offered by projects with fewer than 29 percent of very needy families.

BEST COPY AVAILABLE

Exhibit 5.7: Average Hours of Parenting Education Offered per Month, by Home- vs. Center-based Services and Percent of Very Needy Families (1996-97)

Project and Participant Characteristics	Average Hours of Parenting Education Offered per Month
Home- vs Center-based	
Primarily home-based projects (N=105)	12
Primarily center-based projects (N=508)	21
Percent of Very Needy Families	
Less than 29 percent (N=157)	18
29-40 percent (N=174)	17
41-55 percent (N=158)	17
More than 55 percent (N=154)	24

Note: The results are based on analysis of variance. "Primarily home-based projects" offered 40 percent or more of instructional services in the home setting; "primarily center-based projects" offered less than 40 percent of home-based instruction.

Exhibit reads: In 1996-97, primarily home-based projects offered an average of twelve hours of parenting education per month, while primarily center-based projects offered twenty-one hours per month.

In the early childhood education area, we again found fewer hours offered by home-based projects than center-based projects—averages of twenty-three versus forty-eight hours (Exhibit 5.8). As we found with adult education hours offered, projects with larger budgets offered almost ten more hours per month of educational services to children.

Exhibit 5.8: Average Hours of Early Childhood Education Offered per Month, by Home- vs. Center-based Services and Project Budget (1996-97)

Project and Participant Characteristics	Average Hours of Early Childhood Education Offered per Month
Home- vs Center-based	
Primarily home-based projects (N=104)	23
Primarily center-based projects (N=507)	48
Total Project Budget	
Less than $145,965 (N=153)	39
$145,965 - $220,799 (N=156)	39
$220,800 - $317,960 (N=162)	45
More than $317,960 (N=161)	48

Note: The results are based on analysis of variance. "Primarily home-based projects" offered 40 percent or more of instructional services in the home setting; "primarily center-based projects" offered less than 40 percent of home-based instruction.

Exhibit reads: In 1996-97, primarily home-based projects offered an average of twenty-three hours of early childhood education per month, while primarily center-based projects offered forty-eight hours per month.

Also of interest are the factors that were *not* strongly related to service intensity. Rural/urban community differences, project size, and staff qualifications bore no substantive relationship to educational hours offered in any of the three core service areas (when the effects of the other project and participant characteristics

BEST COPY AVAILABLE

were excluded). Project age was related somewhat to adult education hours but not to parenting or early childhood education hours offered. Project budget influenced the hours offered for adult and early childhood education but not for parenting education.

Home-based programs offered consistently and substantially fewer instructional hours across service areas relative to center-based programs, suggesting that projects balance offering a greater number of contact hours to a group of participants at central facilities versus individually-tailored instructions during fewer hours of home visits. Projects serving high percentages of very needy families offered more adult and parenting education hours than did projects serving fewer very needy families. These findings indicate that parents with greater needs (based on our working definition of very needy families) may require more extensive services to achieve their goals than less needy parents and that projects are responding to this need.

WHAT EDUCATIONAL APPROACHES DO LOCAL PROJECTS USE?

An important element of Even Start is the flexibility that projects have in designing their educational curricula. Projects must provide the three core services to all participating families, but they are encouraged to tailor the delivery of these services to the families they serve.

What educational approaches and curricula have influenced the designs of projects' educational programs? A large percentage of projects in 1996-97 (43 percent to 55 percent) reported having used or incorporated into their programs aspects of the Kenan Family Literacy Approach, High/Scope Curriculum, Parents as Teachers (PAT), and the Head Start program. Other approaches cited by 10 to 22 percent of projects include: Systematic Training for Effective Parenting (STEP/PECES), Bowdoin Method, Parents as Partners in Reading, Parent and Child Education (PACE), Portage Home Teaching, and Home Instruction Program for Preschool Youngsters (HIPPY) Curriculum. While these existing approaches serve as guides for Even Start services, the majority of projects (60 percent) indicated that their program is best described as "locally developed," tailored to the specific needs of their service areas and participants. These findings are consistent with projects' reports from the earlier years of this second evaluation.

CHARACTERISTICS OF EVEN START CURRICULA

Projects were asked to describe their instructional curricula in terms of four dimensions:

- Curriculum design and materials are locally developed versus externally acquired;
- Instructions are individually tailored versus standardized;

- Instructional activities are group- versus individual learner-oriented; and
- Lesson plans are made by learners versus instructors.

In most educational areas, sites developed their own curricula or used curricula that were combinations of locally-developed and externally-acquired materials. In adult education programs, however, 52 percent of sites used mostly externally-acquired curricula and materials, especially for their adult secondary education and GED programs (the results are summarized in Appendix B, Exhibit B.10).

Most project sites individualized their educational curricula to better match their students' needs and abilities (51 percent to 71 percent, depending on the service area)—particularly in adult education programs. Parenting education activities and ESL for adults tended to include more group activities (60 percent and 42 percent of sites, respectively). On the other hand, adult education and GED preparation classes involved more individual activities (34 percent to 44 percent reporting "Mostly alone"). Finally, across all educational areas, between 36 percent and 46 percent of project sites reported that both learners and instructors shared in planning activities; adult education curricula tended to involve more instructor-selection (44 to 48 percent of sites reporting "Mostly instructor") than either parenting or early childhood education programs.

The four sets of descriptors used to assess the characteristics of Even Start curricula provide a broad brush view of the nature of projects' instructional activities. Undoubtedly there are programmatic variations even among projects that rated themselves similarly on these descriptive scales. However, the use of externally-developed curricula and individualized instruction was fairly consistent across educational components and levels. ESL, parenting education, and early childhood education tended to involve more group activities than adult education. Parenting education classes involved more learner-direction than all other educational components. Ratings on these scales are revisited in Chapter 6 when we discuss the analyses that related a host of family and project characteristics to families' participation rates.

IN WHAT CONTEXTS ARE ADULT EDUCATION SERVICES PROVIDED?

Projects described the extent to which their adult education curricula incorporated functional literacy approaches and whether the context of lessons involved life skills, vocational skills, or parenting practices.[66] The majority of project sites in 1996-97 included at least "some" functional literacy in their adult basic education curricula (see the upper half of Exhibit 5.9), and these percentages represent increases over previous years. Project sites that offered at least "some" functional literacy at the secondary level increased from 74 percent in 1994-95 to 80 percent in 1995-96 and 94 percent in 1996-97. Sites reporting at least "some" functional literacy at the intermediate level also increased, from 78 percent in 1994-95 to 82 percent in 1995-96 and 96 percent in 1996-97.

---

[66] The term *functional literacy* refers to the application of literacy-related skills to real-life situations and practical activities. Examples of functional literacy include reading and writing required in jobs, shopping, using public transportation, filling out tax forms, etc.

Exhibit 5.9: Characteristics of Adult Education Services (1996-97)

	Adult Education Components			
	Beginning (0-4)	Inter-mediate (5-8)	Secondary /GED (9-12)	ESL
Primary Instructional Approach				
Mostly functional literacy	28%	29%	71%	37%
Some functional literacy	24%	67%	23%	40%
Little or no functional literacy	48%	5%	7%	23%
Instructional Context				
Life skills	68%	75%	73%	55%
Parenting	65%	75%	74%	49%
Vocational	40%	58%	69%	39%

Note: The percentages for this table are based on 655 project sites operated by the 605 projects included in the evaluation analyses. The percentages in the top three rows do not add up to 100 due to rounding.

Exhibit reads: In 1996-97, 28 percent of Even Start project sites used mostly functional literacy materials in the beginning adult education programs; 68 percent of project sites incorporated life skills training in the beginning adult education programs.

ESL and beginning level adult basic education classes involved the least amount of functional literacy. In these classes, the necessity of learning the basic English language rules, vocabulary, and academic skills may take precedence over practical applications.

The majority of projects incorporated life skills, vocational, and parenting topics and activities into their adult education curricula (lower half of Exhibit 5.9). While life skills and parenting have been common topics of adult education lessons in a majority of Even Start projects over the last three years, inclusion of vocational topics is increasing, possibly in response to welfare reform's mandate that recipients obtain employment. Project sites using vocational materials for the beginning, intermediate, secondary, and ESL classes increased between 5 and 13 percentage points between 1994-95 and 1996-97 (not shown in exhibit).

The largest increase in the use of vocational materials was at the intermediate level (corresponding to 5th- through 8th-grades); from 45 percent of project sites in 1994-95 to 52 percent and 58 percent of project sites in the following two years. With welfare reform, the participants and/or projects may feel an added urgency to focus on job-related skills of adults who lack high-school level academic competencies. This may be an increasing trend in coming years as the implementation of welfare reform progresses.

WHAT ARE THE CONTENTS OF PARENTING EDUCATION?

Parenting education, one of the three required core service components of Even Start, focuses on increasing parents' knowledge about early childhood development and effective parenting behaviors and practices so they can contribute actively and constructively to their children's development. Some activities offered in Even Start parenting education are child-focused; some are parent-focused; and others focus on parents and children jointly.[67]

As was the case in previous years, at least 80 percent of sites provided most of the parenting education activities listed to "most families" (Exhibit 5.10). Ninety-four percent of project sites provided parent-child joint literacy activities to "most families." Commonly addressed child-focused topics were helping parents to: develop a child's language, thinking, social, and motor skills; apply child development principles in interacting with their children; ensure a child's safety and well-being; and manage children's behavior effectively (Exhibit 5.10).

Exhibit 5.10: Percent of Project Sites Providing Various Parenting Education Activities to "Most Families" (1996-97)

	Percent of Project Sites
Parent-child Literacy Activities	**94%**
Child-focused Activities	
Develop child's language and thinking	92%
Apply child development principles	91%
Ensure child's safety and well-being	89%
Develop child's social skills	89%
Manage child's behavior	83%
Develop child's motor skills	82%
Prepare child for school routines	65%
Use TV or outings for instruction	55%
Assist with homework, build on instructional activities	51%
Parent-focused Activities	
Build parent self-esteem	93%
Build parent life skills	85%
Good health and nutrition practices	83%
Knowledge of community and social services	81%
Knowledge of vocational and educational opportunities	69%

***Exhibit reads:** In 1996-97, 91 percent of Even Start project sites addressed the application of child development principles to parenting with "most families."*

Similar to the last two years, notably fewer sites reported helping children with homework, using television or outings for instruction, and preparing children fo

---

[67] The basic objective of parenting education is "child focused" — to benefit the child. The terms "child focused," "parent focused," and "parent-child focused" describe the specific topics addressed in various parenting education activities.

BEST COPY AVAILABLE

school routines as activity themes. The fact that there were relatively fewer families with school-age children participating in Even Start may explain the small percentage of project sites that included school-related activities in parenting education.[68] The common parent-oriented topics were building parents' self-esteem, life skills, good health and nutrition practices, and knowledge of community and social services.

Parent-child joint activities are an essential component of Even Start services. Projects reported the hours of parent-child joint activities offered in three instructional contexts: during home visits, in center-based activities, and during special activities such as field trips and meal functions.

As shown in Exhibit 5.11, hours offered for parent-child joint activities in a center or classroom increased approximately one hour per month from 1994-95 to 1995-96 and remained relatively stable through 1996-97. In 1996-97, on average, a typical family was offered 2.9 hours per month of structured parent-child activities through home visits; 8.1 hours in a center-based environment; and 5.3 hours of field trips, meals, or social functions.

---

[68] We examined whether projects serving relatively higher percentages of school-age children offered more school-related topics in parenting education. (Children ages 6 or older constituted 18 percent of all participating children in 1996-97.) We selected the top quartile of project sites based on the percentage of school-age children (34 percent or more) and compared the types of parenting education activities they offered against data from all project sites. Helping children with homework and classroom instruction was included in parenting education in more project sites (60 percent) with higher percentages of school-age children compared to all Even Start project sites (51 percent). However, the prevalence of school-age children did not affect whether projects addressed preparing children for school routines. Similar results were found in 1995-96.

Exhibit 5.11: Hours per Month of Parent-Child Joint Activities Offered, by Setting (1994-95, 1995-96, and 1996-97)

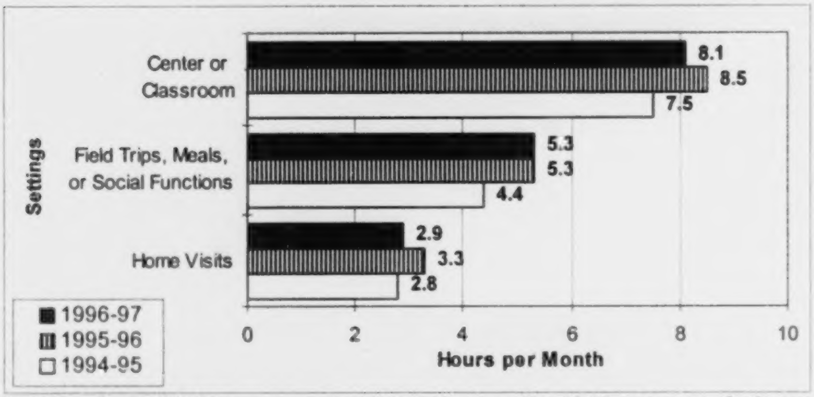


Exhibit reads: In 1996-97, on average, Even Start project sites offered 8.1 hours per month of parent-child joint activities in a center or classroom setting.

Exhibit 5.12 further elaborates the types of parent-child joint activities provided by project sites.

Exhibit 5.12: Percent of Project Sites Offering Various Parent-Child Activities to "Most Families" (1996-97)

Parent-Child Activities	Percent of Project Sites
Reading, storytelling, pre-reading	93%
Language development	90%
Social development	89%
Health and nutrition	81%
Self-discipline, self-help skills	81%
Arts and crafts	80%
Gross motor activities	77%
Early academic skills	76%
Sensory stimulation	75%
Activities selected and led by child	66%
Working with numbers	61%
Working with letters and writing	51%
Computer activities	29%

Exhibit reads: In 1996-97, 93 percent of Even Start project sites provided reading, storytelling, and pre-reading to "most families" in parent-child joint activity sessions.

About 90 percent of the reporting sites provided reading, storytelling, and activities to facilitate children's language and social development to most families in parent-child joint activity sessions. Approximately 80 percent of project sites offered other activities, including health and nutrition practices, children's self-discipline and self-help skills, and arts and crafts to most families. These findings are consistent with previous years' results.

HOW ARE THE CORE EDUCATIONAL PROGRAMS INTEGRATED?

The integration of instructional activities across the three core service areas to encourage "value-added" services is one of the philosophical cornerstones of Even Start. Successful integration is expected to result in curricula that are more meaningful and useful to the whole family as a unit.

Project sites were asked the extent to which pairs of the core components are provided in the same setting, provided by the same instructors, accomplished through parallel activities, or planned for a whole family together in their program.[69] Repeating the findings from previous years, a majority (71 percent) of projects in 1996-97 integrated parenting and adult education services through joint family activities (Exhibit 5.13). Seventy-eight percent "usually" or "always" used this approach to integrate parenting education and early childhood education services.

Exhibit 5.13: Percent of Project Sites, by Nature of Integration of Even Start Core Services "Always/Usually" (1996-97)

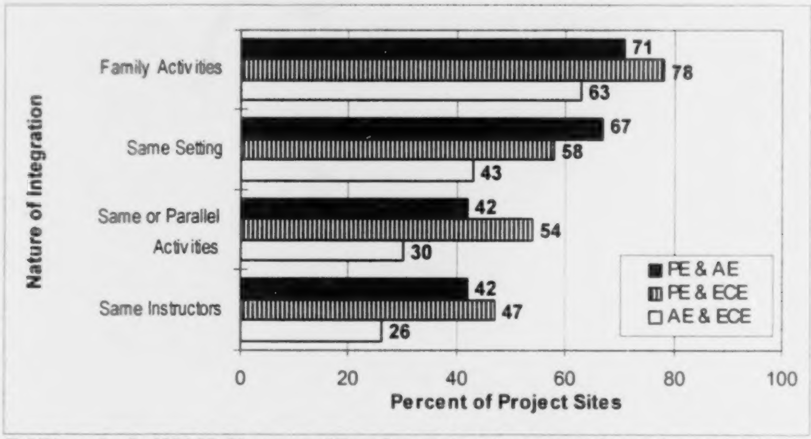


Exhibit reads: In 1996-97, 71 percent of Even Start project sites integrated parenting and adult education curricula by conducting activities involving the whole family.

The second most common approach to integration was to provide services in the same setting. Using this method, 67 percent of project sites integrated parenting and adult education; 58 percent integrated parenting and early childhood education; and 43 percent integrated adult and early childhood education. Overall, adult education and early childhood education were the least likely to be integrated, reflecting the disparity in curricular content between, for example, GED preparation classes and educational activities for preschool children.

---

[69] Services provided at the same setting refer to instructional activities conducted in the same physical setting (e.g., school building, classroom, or participant's home); these services may or may not be designed as parent-child joint activities.

Projects also reported the hours per month that they integrate adult education with parenting education. In 1996-97, as in the previous three years, these two instructional components were integrated an average of twelve to thirteen hours per month, approximately one-third of the total adult education hours offered.

WHAT TRANSITIONAL SERVICES ARE PROVIDED TO CHILDREN MOVING TO KINDERGARTEN AND PRIMARY SCHOOL?

Even Start projects are expected to design early childhood education programs so that each participating child can receive developmentally appropriate services for at least a three-year time frame. During these years, children may experience one or more transitions in services such as: from home-based activities to enrolling in a pre-kindergarten program, moving from pre-kindergarten to kindergarten, or from kindergarten to primary school. Projects are expected to assist children and parents to make these transitions successfully. Exhibit 5.14 lists various transitional services for children and the percentages of Even Start projects that implemented each type in 1995-96 and 1996-97.

Between 1995-96 and 1996-97, the percentage of projects that offered special programs to prepare pre-kindergarten and kindergarten children and their parents for the transitions increased from 63 to 69 percent. For pre-kindergarten children, the most frequent transitional service was facilitating the transfer of student information to kindergartens, reported by 59 percent of projects in 1995-96 and by 66 percent in 1996-97.

More than half of projects helped families with the transition from kindergarten to primary school by coordinating activities with primary school staff and facilitating student information transfer. As stated earlier, families with school-age children were a relative minority in Even Start. Even so, there were slight increases in the percentage of projects offering services to facilitate this transition since 1995-96.

Exhibit 5.14: Transitional Services Even Start Projects Provide to Children (1995-96 and 1996-97)

Transitional Services	Percent of Projects	
For Pre-kindergarten and Kindergarten Children	**1995-96**	**1996-97**
Conduct special programs for pre-kindergarten and/or kindergarten children and parents to facilitate the transition (e.g., special summer program for children, readiness workshops for families)	63%	69%
For Pre-kindergarten Children		
Facilitate transfer of student information to kindergartens (e.g., student assessment information, student records)	59%	66%
Take parents of pre-kindergarten children to visit kindergarten; hold parent meetings with Even Start and kindergarten teachers	48%	55%
Work with kindergarten staff (e.g., coordinate program activities, conduct joint staff training)	50%	54%
Conduct joint activities for pre-kindergarten and kindergarten children	45%	52%
Take pre-kindergarten children to visit kindergarten; take kindergarten children to pre-kindergarten programs to share experiences about the higher grade	46%	49%
For Kindergarten Children		
Work with primary school staff (e.g., coordinate program activities, conduct joint staff training)	51%	54%
Facilitate transfer of student information to primary schools (e.g., student assessment information, student records)	49%	54%
Conduct joint activities for kindergarten and primary school children	35%	41%
Take parents of kindergarten children to visit the primary school; hold parent meetings with Even Start and first-grade teachers	28%	29%
Take kindergarten children to visit the primary school; take children from primary school to kindergarten to share experiences about the higher grade	24%	25%
Conduct extra-year transition classes and/or developmental kindergarten to prepare children for the first grade	19%	18%

***Exhibit reads:** In 1996-97, 69 percent of Even Start projects conducted special programs to help pre-kindergarten and/or kindergarten children and their parents to transition to kindergarten or primary schools.*

HOW DO PROJECTS ACCOMMODATE PARTICIPANTS' NEEDS?

Two of the key elements required in the Even Start program are serving families most in need and providing support services to assist families to participate in educational components. In addition, given the tremendous diversity among families enrolled in Even Start, flexibility in service delivery and negotiating the many constraints that families experience also are critical elements of the program.

FAMILIES' NEEDS FOR SUPPORT SERVICES

Child care is the most common support service needed by Even Start families; 89 percent of project sites reported that "many" or "all" of their families needed

BEST COPY AVAILABLE

this service (Exhibit 5.15). Additional areas where "many" or "all" families needed support were family support[70] (79 percent), transportation (78 percent), and nutrition assistance (75 percent). These percentages have remained largely the same since 1994-95.

Exhibit 5.15: Percent of Project Sites, by Families' Need for Support Services ("All" and "Many" Families) (1996-97)

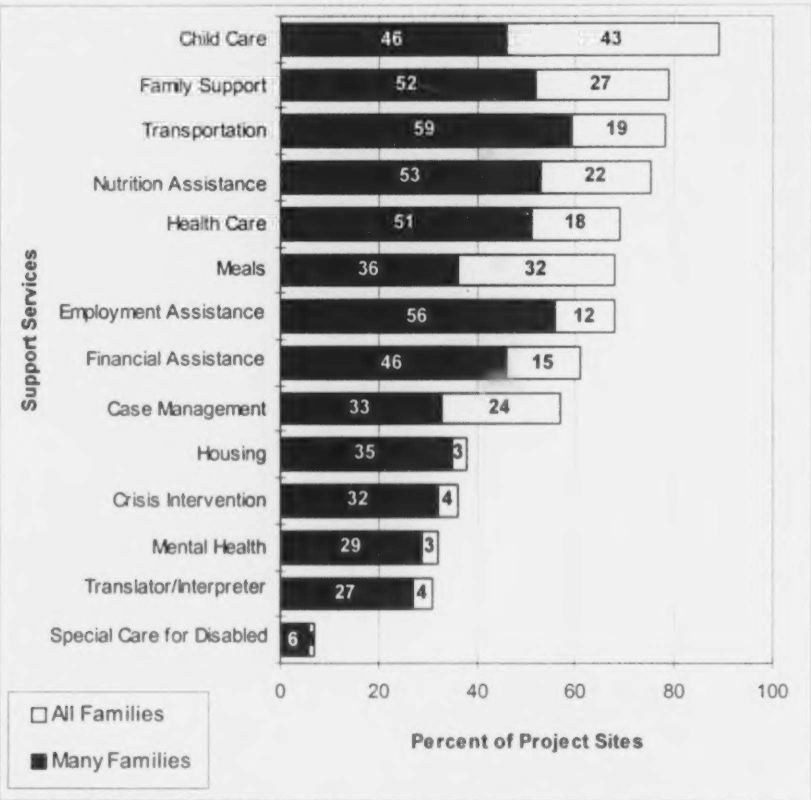


Exhibit reads: In 1996-97, 89 percent of Even Start project sites reported that "all" or "many" of their families needed child care services.

SUPPORT SERVICES PARENTS AND CHILDREN RECEIVED

As a comprehensive educational program oriented to the improvement of the overall functioning of the entire family, Even Start stipulates the provision of support services designed to allow parents and children to maximize the educational opportunities available through the program.

---

[70] The term *family support* refers to such services as counseling, support groups, and advocacy with other agencies.

Projects reported that support services most commonly received by parents included: child care (54 percent); transportation (46 percent); meals (43 percent); and family support (e.g., support groups, 39 percent) (Exhibit 5.16). The services that children most commonly received were meals (51 percent); child care (50 percent); and transportation (45 percent).[71] Fewer families received the types of services that are less directly related to families' access to Even Start educational services compared to child care and transportation. Health care screening and referrals were received by 28 percent of parents and 28 percent of children; employment assistance was provided to 21 percent of parents. Finally, 15 percent of parents and 21 percent of children received no support services through Even Start, although they may have received services from social service agencies not associated with Even Start.

Exhibit 5.16: Percent of Parents and Children Receiving Support Services (1996-97)

Support Services	Parents (N=34,025)	Children (N=45,919)
Child care	54%	50%
Transportation	46%	45%
Meals	43%	51%
Family support	39%	n/a
Social services	36%	n/a
Health care, referral, screening	28%	28%
Employment assistance	21%	n/a
Translator, interpreter	16%	11%
Counseling	n/a	10%
None	15%	21%

Note: "n/a" indicates the types of support services that were assessed only for parents or children but not both.

Exhibit reads: In 1996-97, 54 percent of Even Start parents received assistance with child care.

Families receiving employment assistance increased slightly from 18 percent in 1994-95 to 19 percent in 1995-96 and 21 percent in 1996-97. The percentages of families receiving several other types of support services also increased by 2 to 3 percentage points. Otherwise, results were fairly consistent across the last three years. When we examined the relationships of various family and project characteristics to families' participation rates (presented in Chapter 6), the number of support services received by families was consistently related to the extent of participation.

---

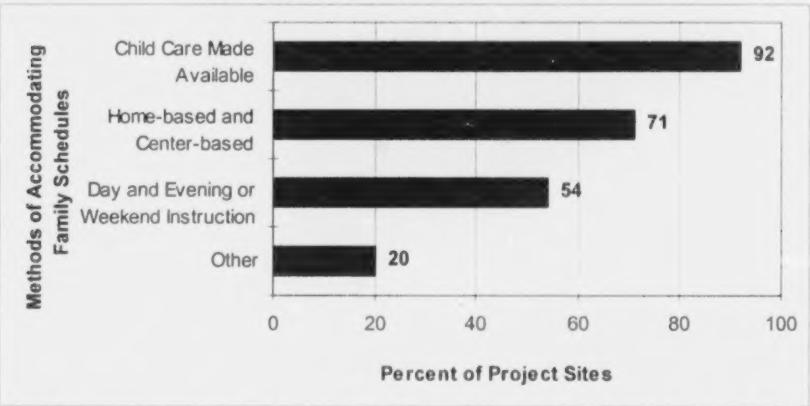
[71] Child care is included among the types of support services parents receive, meaning that child care services for their children allow parents to attend educational services. The apparent difference between the percentages of parents and children receiving this service may be due to different levels of missing data for parents and children. Another possible reason is that many families have multiple children in Even Start. Thus, a parent with one 3-year-old and one 7-year-old may receive child care for the younger child but not necessarily for the older child.

In general, projects' assessment of their participants' *need for support services* was higher than the extent to which the needs were met. Thus, we focused on projects in which all or many of their families needed specific types of services (e.g., child care and transportation) and examined the percentage of families in those projects that received those services during the 1996-97 program year. In the project sites where all or many families needed child care, 56 percent of parents received child care. In project sites where most families needed transportation, 50 percent received transportation assistance. The "gap" in services may suggest that as projects succeed in recruiting more needy families, they may experience greater challenges in meeting all the support service needs of all families.

FLEXIBILITY OF SERVICES

The schedules and needs of Even Start parents differ, and projects strive to accommodate these differences in their service delivery. Ninety-two percent of project sites in 1996-97 provided child care; 71 percent provided both home- and center-based instruction; and more than half provided day and evening or weekend classes (Exhibit 5.17). These results have remained consistent throughout the second evaluation.

Exhibit 5.17: Flexibility in Scheduling of Even Start Services to Accommodate Adult Participants (1996-97)



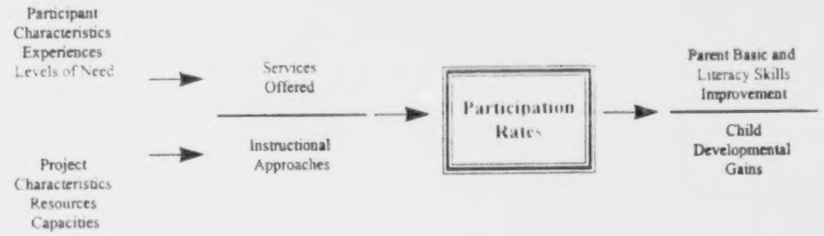
Note: Percentages are based on the number of project sites reported by the 605 projects included in the evaluation.

***Exhibit reads:** In 1996-97, 92 percent of project sites provided child care to enable parents to attend Even Start services.*

Some projects implement several approaches to accommodate family schedules. Twenty-one percent of project sites report implementing one of the three approaches listed above, while 41 percent reported using all three approaches. The flexibility of service schedules was related to the number of home visits families received as discussed in Chapter 6.

BEST COPY AVAILABLE

CHAPTER 6: TO WHAT EXTENT DID EVEN START FAMILIES PARTICIPATE IN THE SERVICES OFFERED?


Participant Characteristics Experiences Levels of Need
Project Characteristics Resources Capacities
Services Offered
Instructional Approaches
Participation Rates
Parent Basic and Literacy Skills Improvement
Child Developmental Gains

Even Start families face many disadvantages beyond low literacy and poverty. These include: unemployment and under-employment; limited English proficiency; physical handicaps, chronic mental or physical problems; and homelessness. Even Start projects implement various strategies to address the diverse educational needs of families. They also provide support services to enable the families to derive the maximum benefit from the educational opportunities. Even so, retaining families, maintaining participant motivation, and helping parents to achieve their educational goals often are the most challenging tasks that projects perform.

This chapter focuses on the extent of participation by *all* (both new and continuing) families who received Even Start services in 1996-97. For selected analyses, the results are compared to participation rates from the previous years of this evaluation. Family-level participation patterns were assessed using the following measures:

- The number of home visits families received during the year;
- Types and hours of adult education and parenting education services in which parents participated;
- The number of months in which children participated in early childhood education;
- The frequency of children's absences from early childhood education activities;
- Whether the family participated in all or only some of the three core services;
- Whether the family was retained at the year's end; and
- The reported reasons for families' exiting the program during the program year.

BEST COPY AVAILABLE

We examined these participation measures in relation to a number of participant and project characteristics that were discussed in Chapters 3 through 5 and that might potentially be related to the extent of families' participation (Exhibit 6.1).

Exhibit 6.1: Participant and Project Characteristics Examined in Multivariate Analyses

Family Characteristics

- New enrollee vs. continuing family
- Parent age
- Parent educational background
- Limited English proficient parent
- Single-parent vs. non-single parent family
- Very needy family
- Number of support services received by family

Project Characteristics

- Rural vs. non-rural service area
- Number of families served in 1996-97
- Project age (years of operating Even Start)
- Total project funds
- Collaboration with other agencies

Staff Resources and Qualifications

- Number of Even Start paid staff
- Ratio of instructors with college or above education
- Average days/year of inservice training
- Ratio of instructors with five or more years of experience
- Problems encountered in program implementation

Service Intensity and Delivery Practices

- Adult education hours offered per month
- Parenting education hours offered per month
- Early childhood education hours offered per month
- Ratio of home-based instruction hours
- Number and extent of parenting education activities offered to families
- Group- vs. individual-based activities
- Learner- vs. instructor-selected lesson plans
- Individualized vs. standardized curriculum
- Extent of functional literacy incorporated in adult education
- Integration across core services
- Flexibility of service delivery
- Transitional services offered to children

First, we used multiple regression techniques to assess whether a family or a project characteristic was related to the outcome of interest (i.e., the dependent variable such as the number of home visits) *while controlling for the potential influence of all other participant and project characteristics entered into the same analysis.* Then we used the results of the regression analyses to guide further examination of the relationships between participant and project

BEST COPY AVAILABLE

characteristics and each participation measure using the analysis of variance method.[72]

HOW MANY HOME VISITS WERE MADE TO FAMILIES?

Home-based instruction, integral to the Even Start philosophy, is a critical element of the overall program design and instructional service delivery. As a family educational strategy, home visits provide such multiple advantages as:

- Linking instructional activities directly to the family setting;
- Providing opportunities for highly individualized, family-oriented instructional activities; and
- Enabling home visitors to identify factors in the home environment that may affect the family's capacity for learning.

The specific number of visits to be conducted is left largely to the projects' discretion. Consistent with the previous two program years, Even Start families participated in an average of seven home visits during 1996-97. Across families, the number of home visits was highly variable; some families received none while others were reported to have received more than 150 during the year—the equivalent of nearly three per week.

A regression analysis revealed that the number of support services families received,[73] project age, the ratio of home-based instruction offered by projects, and flexibility of services were related to the number of home visits families received (Appendix C, Exhibit C.6). Families who received between five and nine types of support services (e.g., child care, transportation, meals, family support) received an average of nine home visits during the year, compared to an average of six visits for families who received one or no support services (Exhibit 6.2).

The differences in the number of home visits across projects reflected other project characteristics. Families in first-year projects, who enrolled after the projects' initial start-up period, logged fewer visits (five and six) while families in projects four years or older averaged between seven and eight home visits in 1996-97. As expected, families enrolled in primarily home-based programs received more than double the number of home visits than those enrolled in center-based programs: thirteen versus six per year, respectively. Projects that accommodated more flexibly to participants' family schedules (by offering child care; day, evening, and weekend classes; and both home-based and center-based services) also conducted more instructional home visits than less flexible projects.

---

[72] See Appendix C for further discussion of the multivariate analysis approach, the variables used in these analyses, the rationale for the analysis approach, and the summary table of final statistics for regression analyses.

[73] The types of support services families received are listed in Exhibit 5.16.

Exhibit 6.2: Average Number of Home Visits per Year, by Number of Support Services Received by the Family, Project Age, Home- vs. Center-based Services, and Flexibility of Services Offered (1996-97)

Project and Participant Characteristics	Average Number of Home Visits Per Year
Number of Support Services Received by Family	
0-1 support services (N=7,766)	6.1
2 support services (N=5,035)	6.7
3 support services (N=5,154)	7.2
4 support services (N=4,248)	8.4
5-9 support services (N=6,772)	9.0
Project Age	
First-year projects (N=3,245)	5.6
Second-year projects (N=3,781)	6.2
Third-year projects (N=2,991)	6.8
Fourth-year projects (N=6,633)	7.5
Five+-year projects (N=11,121)	7.5
Home- vs Center-based	
Primarily home-based projects (N=5,847)	13
Primarily center-based projects (N=25,917)	6
Flexibility of Services (0-3 ways to accommodate to family needs and schedule)	
No special accommodation (N=412)	5.3
One method of accommodation (N=5,121)	4.6
Two methods of accommodation (N=9,781)	5.5
Three methods of accommodation (N=14,075)	9.3

Note: The results are based on analyses of variance.

***Exhibit reads:** In 1996-97, primarily home-based projects conducted an average of thirteen home visits per year per family while primarily center-based projects conducted six.*

Consistent with the family orientation of Even Start, family members who are not formally enrolled in the program also may participate in appropriate educational activities during the home visits. In 18 percent of families, non-Even Start adults took part in the parenting education activities during the home visits (not shown in exhibit). This percentage has remained stable across program years.

WHAT WAS THE EXTENT OF PARTICIPATION IN ADULT AND PARENTING EDUCATION?

A key requirement for Even Start participation is the parent's regular involvement in adult and parenting education. In 1996-97, 94 percent of the

BEST COPY AVAILABLE

29,219 parents for whom projects submitted participation data participated in some form of adult education, and 95 percent participated in parenting education.[74] Adult education participation reflected parents' education and English proficiency levels at the time of intake (Exhibit 6.3).

Exhibit 6.3: Percent of Parents Participating in Adult and Parenting Education Services, by Pre-Even Start Educational Level and English Proficiency (1996-97)

Pre-Even Start Educational Experience	Type of Adult Basic Education (ABE) Program					
	Beginning	Inter-mediate	Secondary/ GED	ESL	Parent-ing Ed.	None
Parents with English Proficiency (N=21,432)						
0 - 6th grades (N=566)	20%	18%	30%	29%	79%	9%
7th - 9th grades (N=6,800)	8%	21%	60%	4%	84%	6%
10th - 12th grades (N=10,955)	5%	14%	65%	3%	82%	6%
High school diploma, GED, or post-secondary ed. (N=3,111)	4%	7%	28%	10%	83%	11%
Parents with Limited English Proficiency (LEP) (N=9,897)						
0 - 6th grades (N=4,038)	16%	6%	6%	75%	77%	11%
7th - 9th grades (N=2,665)	7%	8%	18%	66%	75%	12%
10th - 12th grades (N=1,940)	6%	5%	22%	66%	76%	12%
High school diploma, GED, or post-secondary ed. (N=1,254)	<3%	3%	13%	81%	79%	8%

Note: The percentages are based on the number of parents in each educational level and English proficiency level for whom participation and pre-Even Start educational level data were submitted. The percentages do not total 100 because a parent could participate in more than one program or in no program.

Exhibit reads:* *In 1996-97, 16 percent of LEP parents who entered Even Start with six or fewer years of schooling participated in beginning adult education programs.

---

[74] Approximately 15 percent of participating families and adults in 1996-97 had missing data on participation in adult and/or parenting education. The participation rates cited above are based on participants *with data, excluding those with missing data on these variables.* While the level of missing data has stayed fairly constant since 1994-95, the methods to deal with them in analysis were refined each year based on improvements in data reporting methods. However, one trade-off for increased data accuracy is that resulting participation rates are not precisely comparable across years.

Computing the participation rates treating records with missing data as non-participants (as was done in previous years) yields 89 percent and 91 percent for parents participating in adult and parenting education, respectively, in 1996-97. These figures are slightly higher than respective percentages of 85 percent and 88 percent reported for 1995-96.

BEST COPY AVAILABLE

Among parents who were proficient in English,[75] 60 percent to 65 percent of those who entered Even Start with a 7th- to 12th-grade education (but without a high school diploma) participated in adult secondary/GED programs. A majority of parents who entered with 6th-grade or less education participated in beginning, intermediate, and/or ESL programs.

Roughly 10 percent of all parents entered Even Start with a high school diploma, GED, or some postsecondary education and could read, speak, and understand English (not shown in exhibit). However, 28 percent *of these parents* participated in secondary/GED education and 83 percent participated in parenting education; 11 percent (representing 1 percent of all participants in 1996-97) did not participate in any adult or parenting education programs.[76]

Among the parents with limited English proficiency, a majority participated in ESL programs, especially those who entered with 6th-grade or less education and those who had a high school diploma, GED, or some postsecondary education.

HOURS OF PARTICIPATION IN ADULT EDUCATION

Over the course of the first evaluation, the hours of participation in adult education increased steadily in the 120 projects that began operation in 1989-90 and 1990-91—from sixty-eight hours per year in 1990-91, to ninety-one hours in 1991-92, and to 107 hours in 1992-93. These findings, based on a relatively *small number of maturing projects*, indicated that participation rates increased as projects matured.

During the second national evaluation, the program-wide averages have stabilized after the sharp increases evident in the program's early years. From 1994-95 to 1996-97, average adult education participation hours per year ranged from ninety-two to ninety-six hours, based on substantially *larger numbers of projects (including yearly additions of new projects).*[77] In 1996-97, on average, Even Start parents participated in ninety-six hours of adult education services. This average included about 15 percent of parents who specifically reported zero hours of participation. The average for parents who *attended* adult education was 114 hours.

---

[75] Included in this group were about 10 percent of all 1996-97 participants who spoke languages other than English at home but could read, write, and understand English well or very well.

[76] This small percentage of parents was more interested in the early childhood and parenting education services of Even Start than the average Even Start parent. Thirty-five percent were primarily interested in Even Start early childhood education services; 25 percent were mostly interested in improving their parenting skills; and 35 percent sought to improve their basic academic and literacy skills. For all Even Start parents, the respective percentages were 19 percent, 14 percent, and 56 percent.

Further, some parents who were native English speakers with a high school diploma or GED and who did not participate in adult education in 1996-97 were in the process of leaving the program. More than half had entered the program in 1995-96 or earlier, and 67 percent left the program during 1996-97 (9 percent after completing their goals and 25 percent due to problems such as poor attendance and family conflicts).

While the average in adult education participation hours has stabilized, every year the participation hours have varied widely across parents—for example, from zero to nearly 2,000 hours per year in 1996-97. To better understand the factors that influence participation in adult education, we used a multiple regression analysis to examine the participant and project characteristics introduced earlier in this chapter (Exhibit 6.1).[78]

The number of support services families received and the intensity of adult education (hours *offered*) were related to adult education participation hours (Appendix C, Exhibit C.7). Families that received between five and nine support services participated in an average of 142 hours of adult education, compared to an average of forty-two hours for families who received no support services (Exhibit 6.4).[79]

The participation hours were higher in projects that offered more hours of adult education services compared to projects with lower service intensity. In projects that offered forty-five or more hours of adult education per month, parents participated an average of 144 hours, compared to an average of sixty-eight hours in projects that offered less than fourteen hours per month of adult education services (Exhibit 6.4).

---

[77] Program participation data were not collected in the 1993-94 evaluation year. Due to many differences in data collection procedures between the first and the second evaluations and refinements in the data reporting system during the second evaluation, relatively small changes in participation rates over the years should not be interpreted as reflections of substantive changes in program effectiveness.

[78] In this regression analysis, two independent variables listed in Exhibit 6.1 were excluded: hours per month of parenting education offered and hours per month of early childhood education hours offered.

[79] Causal interpretations of these regression results should be made with caution. For example, the relationship between support services received and participation hours may mean that regularly participating families also had more opportunities to receive support services, rather than the availability of more support services *leading to* greater hours of participation.

Exhibit 6.4: Annual Hours of Participation in Adult Education, by Project Characteristics: 1996-97 Participants

Project Characteristics	Hours of Participation in Adult Education
Number of Support Services Received by Family	
0 support services received (N=4,562)	42
1-2 support services received (N=9,270)	79
3-4 support services received (N=9,947)	104
5-9 support services received (N=7,281)	142
Hours per Month of Adult Education Offered	
Less than 14 hours per month (N=7,047)	68
14-23 hours per month (N=5,610)	80
24-44 hours per month (N=9,662)	89
45 or more hours per month (N=8,427)	144

Note: The results are based on analyses of variance.

***Exhibit reads:** In 1996-97, parents in families that received five to nine types of support services participated in adult education services for an average of 142 hours.*

The regression analysis also identified several characteristics of educational curricula and instructional approaches that were related to adult education participation hours (Appendix C, Exhibit C.7). On average, higher adult education participation hours were reported by projects that used or accomplished the following features more so than other projects:

- Standardized (rather than individually-tailored) curriculum;
- Group-based activities (rather than students working alone);
- Learner involvement in lesson plans;
- Many different types of parenting education activities;
- Integration across the three core service areas; and
- More than nine days per year per staff of inservice training.

These findings are potentially useful in identifying specific service delivery approaches that promote higher participation rates. However, it is important to note that many of these relationships were relatively small in magnitude (although statistically significant) and did not appear consistently in similar analyses. Thus, they should be interpreted as preliminary indications regarding factors that influence participation.

Contrary to our expectations, age of project (years of experience in operating Even Start) was not as strongly related to adult education participation hours as other program characteristics discussed above. Regression analysis allows us to examine the impact of one factor (e.g., project age) while statistically controlling for the effects of all other factors. While we may assume that mature projects are more likely to achieve greater adult education attendance, a more accurate description may be that mature projects tend to have more of the features that are discussed above (e.g., more service hours, more standardized, group-based

BEST COPY AVAILABLE

curriculum, greater integration across service areas, more staff training), features that are related to participation.

We also examined the extent of adult education participation in relation to parents' age and educational background (Exhibit 6.5). Teen parents were the most active participants in adult education (139 hours average). Parents who enrolled in the program with a high school diploma, GED, or some postsecondary education spent the least time in adult education—seventy-nine hours, compared to less educated parents, who averaged ninety-nine to 102 hours (Exhibit 6.5, the right-most column).

Exhibit 6.5: Annual Hours of Participation in Adult Education, by Parents' Age and Educational Background (1996-97)

	Parent Age				
Educational Levels	**Less than 20 Years**	**20-29 Years**	**30-39 Years**	**40 or More Years**	**Across All Age Groups**
6th grade or less	106 hours (111)	97 hours (1,618)	96 hours (1,911)	108 hours (764)	**99 hours (4,404)**
7th-9th grades	135 (1,902)	91 (4,523)	97 (2,072)	107 (537)	**102 (9,034)**
10th-12th grades	146 (2,201)	89 (6,735)	95 (2,815)	88 (560)	**100 (12,311)**
High School diploma, GED, or postsecondary ed.	100 (113)	81 (1,822)	80 (1,713)	63 (418)	**79 (4,066)**
Across All Educational Levels	**139 (4,927)**	**89 (14,698)**	**93 (8,511)**	**95 (2,279)**	**98 (29,815)**

Note: The number of parents in each group is indicated in parentheses. The number of parents included in this analysis was lower than the number reported in Exhibit 6.3 because records with missing data for age were excluded from this analysis.

***Exhibit reads:** Teen parents who had reached the 10th to 12th grades at the time of enrollment participated in adult education programs for an average of 146 hours in 1996-97.*

In addition, there was a significant interaction between parent age and education level. Teen parents who enrolled with 10th- to 12th-grade education (but without a high school diploma or GED) were the most active participants (146 hours per year). It is not surprising that parents with a well-defined short-term goal would participate more regularly and intensively. The higher participation rates among teen parents also may be explained by projects reporting (correctly) most or all of high school class hours for parents enrolled in high schools.

At the other end of the spectrum, among parents age 40 or older, those educated at or below the 9th-grade level participated the most, possibly because their educational needs and the effort necessary to overcome them are the greatest. The group that may present the most challenges in maintaining regular attendance in adult education consists of older parents (40 years or older) who lack a few years of high school education.

For all age groups 20 years or above, the parents who enrolled with a high school diploma, GED, or some postsecondary education had considerably lower participation rates than the national average. As we discussed earlier, many of these parents were in the process of leaving the program during 1996-97.

HOURS OF PARTICIPATION IN PARENTING EDUCATION

In 1996-97, 95 percent of parents participated in parenting education.[80] The average participation across all parents (including those who indicated zero hours of participation) was twenty-eight hours per year. Among parents who attended parenting services at least one hour during the year, the average was thirty-two hours.

The average participation hours in 1992-93 (based on participants in 120 mature projects) were 58 hours per year, substantially higher than 32 hours in 1994-95, 27 hours in 1995-96, and 28 hours in 1996-97. The averages since 1994-95 represent new and continuing projects, and project age was related to the hours of participation in parenting education. Thus, part of the difference between the 1992-93 and subsequent averages could be due to new projects included in the lower averages. However, even among the 1996-97 fourth-year projects, the average participation hours were much lower (35 hours, Exhibit 6.6) than 58 hours reported for 1992-93. As the Even Start program expanded and evolved during the latter half of the 1990's, it is possible that the emphasis on parenting education may have waned somewhat.

Since the extent of participation in parenting education also varied greatly across parents, we used a multiple regression analysis to examine factors related to parents' participation in parenting education (see Appendix C, Exhibit C.8 for detailed regression results).[81] Greater hours of participation in parenting education activities were related to the following features of service delivery:

- Number of support services families received (families receiving five to nine types of support services participated an average of forty-two hours in parenting education, compared to twelve hours for families that received no support services, Exhibit 6.6);
- Hours of parenting education services offered (projects offering fewer than eight hours of parenting education per month reported an average of twenty participation hours per year compared to forty-two hours in projects offering twenty-four or more hours of parenting education);

---

[80] This percentage excludes parents for whom parenting education participation data were missing.

[81] For this regression analysis, the same set of independent variables was used as the adult education participation hour analysis, except for replacing "Hours of adult education services offered" with "Hours of parenting education services offered."

- Many different types of parenting education activities; and
- Integration across three core services.

These service features also were related to greater participation in adult education. In addition, the relationship between project age and parenting education participation hours was similar to the relationship observed in the first national evaluation. Fourth-year projects reported higher participation hours than younger projects (Exhibit 6.6).

Exhibit 6.6: Annual Hours of Participation in Parenting Education, by Project Characteristics: 1996-97 Participants

Project Characteristics	Hours of Participation in Parenting Education
Number of Support Services Received by Family	
0 support services (N=4,472)	12
1-2 support services (N=9,242)	22
3-4 support services (N=9,956)	31
5-9 support services (N=7,274)	42
Project Age	
Less than 2 years (N=3,606)	21
Two years (N=4,082)	26
Three Years (N=3,307)	28
Four Years (N=7,104)	35
Five Years + (N=12,212)	27
Hours per Month of Parenting Education Offered	
Less than 8 hours per month (N=5,802)	20
8 -13 hours per month (N=9,155)	18
14-23 hours per month (N=9,323)	31
24 or more hours per month (N=7,045)	42
Number and Extent of Parenting Education Activities Offered (Rating range 11-60)	
Less than 54 rating (N=5,808)	20
54-56 rating (N=6,679)	26
57-58 rating (N=7,281)	28
59+ rating (N=11,406)	32
Extent of Integration Across Educational Service Areas (Rating range 2-4)	
Integration measure rating 2 (N=8,476)	25
Integration measure rating 3 (N=19,112)	28
Integration measure rating 4 (N=2,576)	39

***Exhibit reads:** On average, participants who received five to nine types of support services participated in forty-two hours of parenting education in 1996-97.*

In 1996-97, there was a slight drop in the average participation hours for projects five years or older. This "drop" was not due to fifth- and sixth-year projects enrolling many new participants and possibly repeating the participation patterns similar to parents in the first- and second-year projects. Except for the first-year projects, the percentages of new families were fairly constant among all other

BEST COPY AVAILABLE

project age groups, and the percentages of families participating in all core services did not drop among older projects. Another possible explanation for the drop in average parenting education hours is that projects in their second four-year cycle may relax the parenting education requirements somewhat. Although this hypothesis is not testable by currently available data, it alerts us to explore this issue in future Even Start evaluations.

WHAT WAS THE EXTENT OF PARTICIPATION IN EARLY CHILDHOOD EDUCATION?

Ninety-five percent of the 45,919 children for whom we received participation data in 1996-97 participated in some form of early childhood education services. The most common types of early childhood education services were organized, center-based programs (43 percent) and individualized, home-based programs (37 percent, Exhibit 6.7). The percentages of children participating in day care programs that included educational components increased by 13 percentage points between 1995-96 and 1996-97 (from 6 percent to 19 percent) possibly reflecting the increasing numbers of infants and toddlers in Even Start. On the other hand, the percentage of children receiving Even Start services designed for school-age children decreased from 17 percent to 7 percent over these two years.

Exhibit 6.7: Percent of Children Participating in Early Childhood Education Programs, by Child's Age: 1996-97 Participants

	Total	Child's Age in Years (Number of Children)				
ECE Services	N=43,394	0-2 (14,523)	3-4 (13,625)	5 (5,640)	6-7 (7,009)	8 or older (2,597)
Organized, center-based	43%	42%	65%	41%	19%	16%
Individualized, home-based	37%	44%	39%	32%	27%	23%
Coordination with compulsory schooling	22%	1%	6%	46%	66%	47%
Day care with educational component	19%	29%	20%	11%	7%	6%
Even Start services for school-age children	7%	1%	3%	10%	16%	20%
None	10%	13%	7%	7%	9%	21%

Note: The percentages in each column are based on the number of children in that age group. The percentages do not total 100 because each child could participate in more than one type of service.

The percentages in the row labeled "None" represent children for whom projects specifically marked "None" to describe the types of programs in which children participated. However, using responses to several questions that referred to participation (e.g., months of participation), we determined that 95 percent of all children participated in some form of Even Start early childhood education services.

Exhibit reads: Forty-four percent of infants and toddlers ages 0 to 2 years participated in individualized, home-based ECE in 1996-97.

As expected, a majority of 6-7-year-olds received Even Start educational services that were coordinated with their compulsory education activities. Participation in Even Start-sponsored center-based programs and home-based services was more common among younger children. Every year since 1994-95, about 5 to 10 percent of children in participating families did not participate in any Even Start early childhood education services.

Of the 5 percent of children who did not participate in any Even Start services in 1996-97, 34 percent were 0-2-year-olds, 21 percent were 3-4-year-olds, 10 percent were 5-year-olds, 16 percent were 6-7-year-olds, and 18 percent were older than 7 years (not shown in exhibit). The non-participating infants and toddlers (representing less than 2 percent of all children in the participating families) may have been younger siblings of preschool age children who were regular Even Start participants. The non-participating children ages 8 and older, representing 1 percent of all Even Start children in 1996-97, may have "graduated" from the core early childhood education services offered by their projects although their parents were still completing their educational goals.

In terms of length of participation, nearly one-third of children (31 percent) participated for one to three months; 19 percent for four to six months, 28 percent for seven to nine months, and 22 percent participated for ten to twelve months (not shown in exhibit). These percentages have remained constant over the last three years.

Using multiple regression, we identified several parent, child, and project characteristics related to children participating in Even Start for ten to twelve months during 1996-97 (Appendix C, Exhibit C.9).[82] The rates of "full-year participation" (i.e., ten to twelve months) differed substantially between new enrollees and children who continued from previous years, representing 65 percent and 35 percent, respectively, of all Even Start children in 1996-97. Children who enrolled in the middle of the program year could not participate for ten to twelve months in a given program year, for example. However, it is noted that 36 percent of children who continued from previous years participated in Even Start nearly the entire program year (Exhibit 6.8). Given that 35 percent of children in 1996-97 had continued from previous years, roughly 13 percent of children who participated in 1996-97 had received one full year or more of Even Start services by the end of that program year.[83]

---

[82] This multiple regression analysis used the same set of independent variables listed in Exhibit 6.1, except that it excluded "Hours of adult education services offered" and "Hours of parenting education services offered."

[83] Data collected for the second national evaluation did not allow us to examine closely how long each family, parent, and child participated in Even Start. Data collected in the third national evaluation will allow more accurate analyses of participation patterns (e.g., comparisons of possible versus actual numbers of months of participation).

Exhibit 6.8: **Rates of Children Participating in Even Start for 10-12 Months, by Child's Age and New vs. Continuing Status (1996-97)**

		Enrollment History	
Child Age	**All Children**	**1996-97 New Enrollees**	**Continued from Previous Years**
Less than 3 years	**16% (13,531)**	10% (9,676)	33% (3,855)
3-4 years	**23% (12,906)**	16% (8,372)	36% (4,534)
5 years	**27% (5,151)**	18% (2,761)	38% (2,390)
6-7 years	**29% (6,163)**	18% (2,957)	39% (3,206)
8 and older	**32% (2,019)**	19% (776)	40% (1,243)
Across All Age Groups	**22% (39,770)**	**14% (24,542)**	**36% (15,228)**
Number of Support Services Received by Family	**All Children**	**1996-97 New Enrollees**	**Continued from Previous Years**
0 support services	**19% (4,210)**	12% (2,384)	27% (1,826)
1-2 support services	**21% (11,684)**	13% (7,510)	35% (4,174)
3-4 support services	**22% (13,222)**	13% (8,336)	38% (4,886)
5-9 support services	**25% (10,090)**	17% (6,216)	38% (3,874)
ECE Hours Offered Per Month	**All Children**	**1996-97 New Enrollees**	**Continued from Previous Years**
0-15 hours	**23% (8,400)**	13% (5,113)	39% (3,287)
16-35 hours	**19% (8,675)**	12% (5,680)	32% (2,995)
36-64 hours	**24% (9,456)**	17% (5,606)	36% (3,850)
65+ hours	**25% (11,643)**	16% (6,652)	38% (4,991)

Note: The number of children in each group is indicated in parentheses.

Exhibit reads:** **10 percent of new children younger than 3 years participated in Even Start early childhood education services for ten to twelve months.

Combining new and continuing children together, children of teen parents were less likely to participate ten to twelve months (14 percent) than were children of parents age 30 years or older (26-28 percent, not shown in exhibit). Children in kindergarten and primary school had higher rates of "full-year participation" (27-32 percent) than pre-kindergarten children (16-23 percent). This may be due to a somewhat higher percentage of teen parents who exited the program during 1996-97 compared to older parents.

The regression analysis revealed several service delivery features that were positively related to the extent of children's participation in Even Start (see Appendix C, Exhibit C.9 for detailed results), including support services and service intensity that were related to parents' participation rates:

- Number of support services families received, especially for children continuing from previous years (Exhibit 6.8);
- Service intensity (25 percent of children enrolled in projects offering sixty-five or more hours per month of early childhood education participated for ten to twelve months, compared to 19 percent of children in projects offering sixteen to thirty-five hours of services, Exhibit 6.8);

- Integration of services across all core service areas;
- Transitional services for children; and
- Number of Even Start paid staff.

Regarding service intensity, projects offering the fewest average hours of services also had a relatively high percentage of children who participated for ten to twelve months. These projects include many of the "home-based" projects in which service hours tend to be substantially lower than center-based projects, but the extent of families' involvement appears to be at least on par with the national average.

In addition to longevity of participation, we examined the regularity of children's attendance in early childhood education activities. Consistent with the previous three program years, the majority of children participating in 1996-97 had solid attendance records (76 percent). Fifty-one percent were rarely absent, and 25 percent were absent only occasionally.

WHAT PERCENTAGE OF FAMILIES PARTICIPATED IN ALL THREE CORE COMPONENTS?

Families who enroll in Even Start are expected to participate in adult education, parenting education, and early childhood education services. Ninety-three percent of families in 1996-97 participated in all three core components.[84]

A multiple regression analysis yielded two factors that were highly related to participation in all core services: the number of support services families received and project age (see Exhibit 5.16 for a list of services). Virtually all (99 percent) of the families who received five or more types of support services participated in all core services, compared to 79 percent of families who received little or no support services (Exhibit 6.9).

---

[84] The rates of families participating in all core services reported in the annual evaluation reports have increased over the last three years. However, these increases were due, at least in part, to refinements in data reporting procedures. All family records with missing participation data in one or more service areas were excluded from the computation of the 1996-97 rate based on the rationale that we did not know whether these families participated in all three service areas. This resulted in excluding approximately 16 percent of all families from this computation. In the past, these families were coded as "not participating in all three service areas." Excluding these families from the computation had the effect of raising the rate of participation in all core services. Most likely the true rate was somewhere in between 93 percent (which is backed by available data) and 78 percent (i.e., the rate if all families with missing data actually did NOT participate in all core areas, similar to the 1995-96 rate of 75 percent).

Third-year projects as a group had the highest rate of participation in all core services—higher than in younger or more mature projects (Exhibit 6.9). The rising rates up to the third year may portray progressive enhancements in service implementation, while a slight drop among fourth-year projects may suggest that some families are completing some, but not all, of their educational goals. The somewhat higher rate of full participation in projects with five or more years of Even Start experience seems to validate their expertise which afforded them the continued funding.

Seven percent of all 1996-97 families participated in some, but not all, core services. No specific family characteristics (e.g., teen parents, older parents, parents with various levels of prior education, very needy families, less needy families, families with young versus older children, etc.) were related to partial participation. Available data did not allow us to examine closely the possible reasons for partial participation which may include: children continuing to participate after their parents completed their program goals, or vice versa; new projects offering partial services in the beginning months of implementation; and some families being more interested in adult education than child education, or vice versa.

Exhibit 6.9: Rates of Families Participating in All Three Core Services, by Project Characteristics: 1996-97 Participants

Project Characteristics	Rates of Participation in All Core Services
Number of Support Services Received by Family	
0-1 support services (N=5,944)	79%
2 support services (N=4,290)	96%
3 support services (N=4,560)	97%
4 support services (N=3,692)	98%
5 or more support services (N=6,211)	99%
Project Age	
Less than 2 years (N=2,241)	92%
Two years (N=3,101)	91%
Three Years (N=2,596)	95%
Four Years (N=5,436)	92%
Five Years + (N=9,762)	94%

Note: The number of families in each group is indicated in parentheses.

Exhibit reads: In 1996-97, 99 percent of families that received five or more types of support services participated in all core services, compared to 79 percent of families that received one or no support services.

WHAT ASPECTS OF EVEN START SERVICES ARE RELATED TO PARTICIPATION RATES?

A number of participant and project characteristics were found to be associated with various measures of participation rates. As we mentioned earlier, many of

BEST COPY AVAILABLE

the findings, while statistically significant, were inconsistent across related analyses and should be regarded as preliminary indications until similar findings emerge in future analyses.

However, three factors repeatedly emerged as contributors to families' participation: service intensity (hours offered in each of the three core educational components), support services that families received, and integration of services. The data suggest the following: (1) Projects should increase and maintain high levels of contact hours offered. Even though most Even Start families participate in fewer hours of instruction than the amount offered, they participate more in projects that offer more hours. (2) Projects should integrate, as much as possible, the instructional context, contents, and/or activities across adult, parenting, and early childhood education. (3) Projects should provide as many support services as possible, either directly or through referrals to collaborating agencies, to enable families to participate fully in Even Start educational services.

SERVICE INTENSITY (HOURS OFFERED)

Since 1994-95, we have found a strong relationship between the number of contact hours that projects scheduled per participant and the hours that parents and children actually participated. Overall, participation increased according to the number of service hours offered for both adult and parenting education (Exhibit 6.10).[85]

---

[85] Note: whether a family was a new enrollee or continuing from previous years was not strongly related to adult and parenting education participation hours (based on regression analyses, see Appendix C).

Exhibit 6.10: Annual Hours of Participation in Adult Education and Parenting Education, by Hours/Month Services Offered in the Respective Service Area (1996-97)

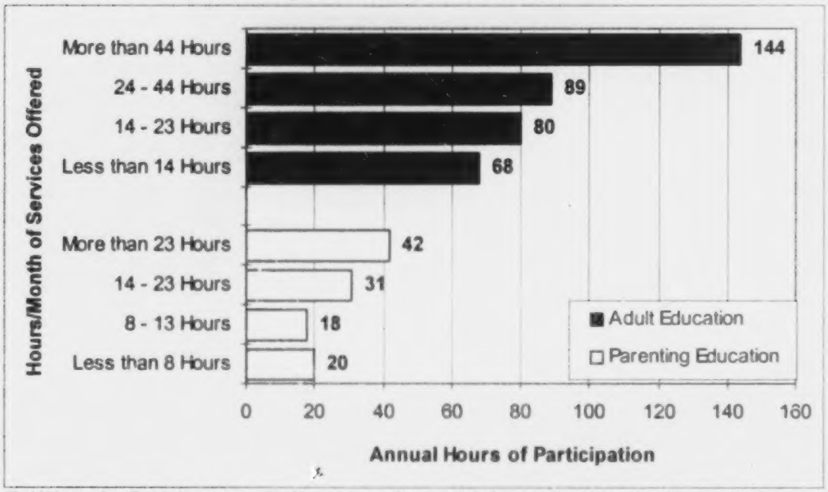


Exhibit reads: Participants enrolled in projects that provided more than forty-four hours of adult education activities per month received an average of 144 hours of adult education per year in 1996-97.

For early childhood education, the relationship between service intensity and participation varied by enrollment status (see Exhibit 6.8). Among new enrollees, the highest percentages of the ten to twelve month participants (17 and 16 percent) were enrolled in projects that offered thirty-six or more hours per month.

Among continuing students, however, the highest percentages of full-year participants (39 percent and 38 percent) were found in projects that offered the fewest contact hours (fifteen or less) as well as the most hours (sixty-five or more).[86] These results may suggest that offering more hours of services and offering qualitatively intensive services may represent two separate factors; each is important and combined they would be the most effective.

SUPPORT SERVICES FAMILIES RECEIVED

Projects may not always be able to remove personal and family circumstances that act as barriers to participation, but, as we saw in Chapter 4, they can offer support services that make Even Start educational services more accessible to families. The number of support services received by families was a consistent, substantial, and positive indicator of high levels of participation in adult, parenting, and early childhood education programs. As a group, families who received five to nine support services in 1996-97 also were more likely to participate in all three core educational components.

---

[86] Projects offering relatively few hours of early childhood education were not necessarily the projects that offered largely home-based services.

INTEGRATION OF SERVICES

Integration of the three core educational services was associated with greater participation in adult and parenting education.[87] Children enrolled in projects with highly integrated educational programs were significantly more likely than those in less integrated programs to have received ten to twelve months of early childhood education. The higher participation rates among families enrolled in relatively more integrated programs suggest that families may find these activities meet their multiple educational needs more effectively than more compartmentalized activities.

Thus, families enrolled in projects that offered more hours of instructional services and more integrated services relative to others and families that received more support services participated more in Even Start educational services. This does not mean that other aspects of services (types of curriculum, staff qualifications, resources spent per family, etc.) are not important. With more refined measures, future analyses may be able to assess more clearly the relative importance of many other service characteristics.

WHAT WERE THE PATTERNS OF RETENTION?

In 1996-97, of the 31,121 families for whom the projects provided year-end status, *56 percent were continuing to participate at year-end,* while 44 percent had left the program during the year. Part of the 44 percent represented families who left the program having completed their educational goals.[88] An adjusted *continuation* retention rate, excluding families that completed goals, was 60 percent (64 percent for new families and 54 percent for families continuing from previous years); the rate of termination for reasons other than program completion was 40 percent.

---

[87] This was NOT due to double counting hours of *participation* in activities that integrated adult and parenting education objectives and/or content topics. Unlike the hours of services *offered,* projects were asked NOT to double-count the *participation* hours; each hour was reported either as adult education or parenting education, depending on the *primary* purpose of the activity.

[88] Even Start has no standard criteria for "goal completion." The specific goals for each family are likely to reflect the educational needs and capacities of participants and the educational curriculum offered by the project. Accordingly, the determination of goal completion is also likely to be specific to each family.

Since 1994-95, the breakdown of families that were *participating at year-end* versus those who left the program has been roughly 60/40 percent. However, each year, we observed that some families that were reported to be continuing at year-end did not actually participate in the program in the following year. Exhibit 6.11 presents all available data from both the first and the second evaluations that shed light on the retention patterns across program years for various participant groups.

Exhibit 6.11: Percent of Families, by Years of Participation in Even Start

	Years of Participation			
Participant Groups	One Year	Two Years	Three Years	Four Years
First National Evaluation				
New families who enrolled in 76 **new** projects in 1989-90	53%	24%	13%	10%
New families who enrolled in 44 **new** projects in 1990-91	27%	42%	31%	n/a
Second National Evaluation				
All families (new and continuing) who participated in 513 projects (new and continuing) in 1994-95	62%	21%	17%	n/a
New families who enrolled in 576 projects (new and continuing) in 1995-96	59%	41%	n/a	n/a

Note: "n/a" denotes unavailability of data or "not applicable."

***Exhibit reads:** 53 percent of families who enrolled in 1989-90 exited within the first year of enrollment; 24 percent participated for two years; 13 percent for three years; and 10 percent for four years.*

The cross-year retention rates were 47 percent for new families who enrolled in 1989-90, 73 percent for new families who enrolled in 1990-91, and 41 percent for new families who enrolled in 1995-96. We need to keep in mind that currently available data only allow limited analyses of retention patterns. The participant groups presented in Exhibit 6.11 are quite different in terms of composition (only new versus new and continuing families), number and age of projects represented, and the legislative and programmatic contexts in which the projects operated. Data collected in the third national evaluation will allow much more in-depth analyses of Even Start participation patterns.

FAMILIES THAT WERE CONTINUING PARTICIPATION AT YEAR-END

Excluding the participants who left after completing the program, we examined continuation rates of 1996-97 new enrollee families by parent age and education level at program intake. Teen parents and parents in their twenties were less likely to be continuing at year-end (59 percent and 62 percent, respectively) than were parents who were age 30 or older (69 percent and higher, not shown in exhibit). Families in which parents had either 6th-grade or less education or high school diploma or higher were more likely to continue in Even Start (72 percent and 69 percent, respectively) than families with mid-level parental education (61 percent). New families that received many types of support services were more likely to continue (70 percent) than new families that received little or no support services (59 percent).

FAMILIES THAT COMPLETED THEIR EDUCATIONAL GOALS AND LEFT THE PROGRAM

Overall, the rates of program completion were 9 percent for families that continued participation from previous years and 5 percent for 1996-97 new enrollees. A regression analysis indicated that none of the factors entered in the analysis could explain much (3 percent) about differences in the completion rates.[89] However, comparisons among various participant groups revealed that completion rates varied by parent age and educational level (Exhibit 6.12).

Among families that continued from previous years (who were more likely to complete their goals than new enrollees), teen parents who enrolled with a high school diploma, GED, or some postsecondary education had the highest completion rate (33 percent) although this group consisted of only twenty-one parents. They were followed by continuing teens who enrolled at the 10th- to 12th-grade level (18 percent).

---

[89] This analysis used all the independent variables listed in Exhibit 6.1.

Exhibit 6.12: Program Completion Rates of Parents, by Age, Educational Level, and New vs. Continuing Status (1996-97)

Educational Level and Adult Age	Enrollment History 1996-97 New Enrollees	 Continued from Previous Years
GRADES 0-6		
Less than 20 years	0% (71)	6% (17)
20-29 years	0% (867)	3% (488)
30-39 years	0% (939)	2% (706)
40 years or older	1% (359)	2% (305)
GRADES 7-9		
Less than 20 years	5% (1,345)	10% (477)
20-29 years	5% (2,663)	10% (1,607)
30-39 years	3% (1,117)	10% (975)
40 years or older	2% (281)	9% (244)
GRADES 10-12 (Non Graduates)		
Less than 20 years	9% (1,709)	18% (431)
20-29 years	7% (4,256)	11% (2,556)
30-39 years	5% (1,709)	10% (1,288)
40 years or older	4% (303)	8% (256)
High school diploma, GED, postsecondary education		
Less than 20 years	10% (90)	33% (21)
20-29 years	6% (1,081)	9% (566)
30-39 years	6% (951)	11% (668)
40 years or older	7% (217)	11% (141)

Note: The number of adults in each group is indicated in parentheses.

***Exhibit reads:** Among parents who enrolled in previous years with a 10th- to 12th-grade education and continued participation, 18 percent of teen parents completed their goals and left the program in 1996-97 compared to 8 percent of parents age 40 or older.*

Parents who were native English speakers were three times more likely to complete the program during 1996-97 than were parents with limited English proficiency (9 percent versus 3 percent, not shown in exhibit). However, even among families with limited English proficiency, parents who had entered Even Start with at least a 10th-grade education and continued participation from previous years had completion rates of 10 percent to 12 percent.

FAMILIES THAT EXITED THE PROGRAM

Of all the 1996-97 participating families, 7 percent left the program after completing their planned educational goals (see Exhibit 6.13 for termination reasons broken out by new and continuing families). Another 6 percent exited the program because parents had found employment that conflicted with continued participation; 16 percent left because of various problems (e.g., poor attendance; family problems and crises preventing participation; and lack of interest).

BEST COPY AVAILABLE

In addition, 7 percent of families participating in 1996-97 left Even Start for reasons other than the eight listed in Exhibit 6.13. (The additional reasons are listed in Appendix B, Exhibit B.11.) Throughout this four-year evaluation, frequently cited additional reasons for families leaving the program have included health problems; maternity leave or the arrival of a new infant; lack of transportation; homelessness; and termination or reduction of Even Start services due to insufficient resources. Impacts of welfare reform legislation, first reported by projects in the 1995-96 evaluation as reasons for some families' termination, were also specifically cited in 1996-97.

Exhibit 6.13: Percent of New and Continuing Families, by Year-end Participation Status (1996-97)

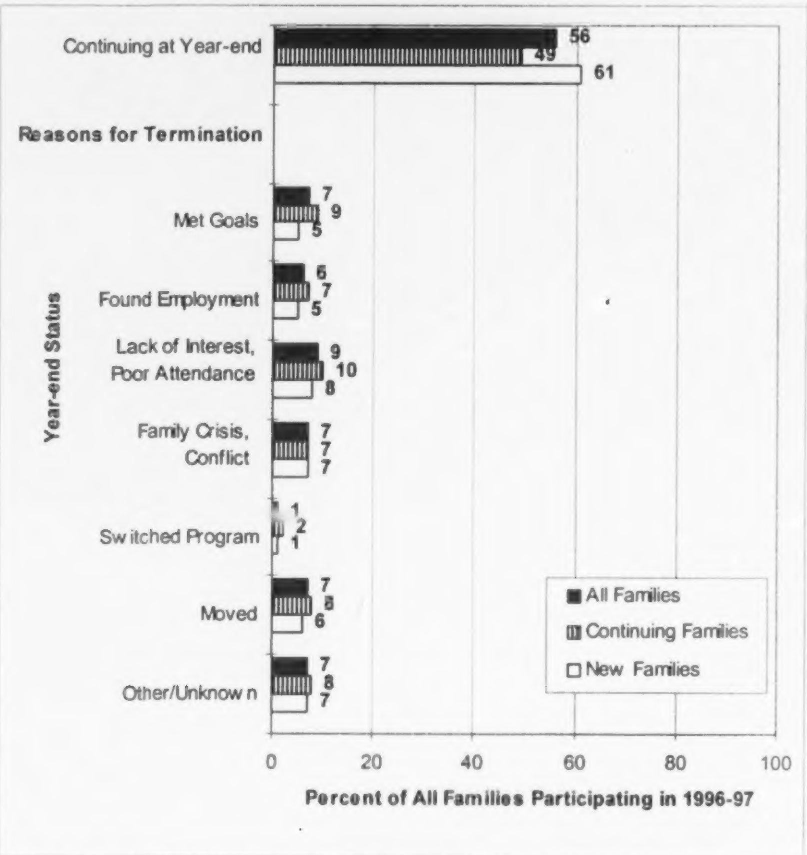


Exhibit reads: Of the families who continued participation from previous years, 9 percent exited the program in 1996-97 after meeting their educational goals.

Among families continuing from previous year(s) but terminated during 1996-97, parents' educational backgrounds and ages were associated with lack of motivation or poor attendance. Families with parents at the highest and lowest educational levels were less likely to exit because of low motivation and attendance than parents with intermediate levels of education (Exhibit 6.14).

BEST COPY AVAILABLE

Finally, as parents' age increased, exits from Even Start due to low motivation and attendance declined (Exhibit 6.14). Although families with teen parents had higher rates of participation in all core services and more hours of adult education than families with older parents, by the year's end the former were more likely to leave the program because of low motivation.

Exhibit 6.14: Percent of Families That Continued from Previous Year(s) but Left the Program for Lack of Motivation, by Parent Age and Education (1996-97)

Age of Parent	Percent of Families
Less than 20 years (N=1,119)	14%
20-29 years (N=6,109)	11%
30-39 years (N=4,249)	8%
40 years or older (N=1,246)	6%
Parents' Educational Level	**Percent of Families**
0-6 grades (N=2,090)	7%
7-9 grades (N=3,805)	11%
10-12 grades (N=4,898)	10%
High school diploma, GED, or higher (N=1,930)	7%

Note: The number of families in each group is indicated in parentheses.

***Exhibit reads:** 14 percent of families with teen parents that continued participation from 1995-96 or earlier were terminated during 1996-97 due to lack of motivation, compared to 6 percent of families with parents age 40 years or older.*

TO WHAT EXTENT DID THE VERY NEEDY FAMILIES PARTICIPATE IN EVEN START SERVICES?

In Chapter 3, we began the discussion of evaluation findings with the question: "What are the needs of Even Start families?" and described the profiles of very needy families—roughly 40 percent of all Even Start families who have multiple needs and disadvantages. In Chapter 5, we described projects serving high percentages of very needy families offering more hours of services in adult and parenting education.

Every year, project directors report that maintaining participant motivation and retaining families are two of the most difficult challenges they face. This difficulty is likely to be even greater for the very needy families who must overcome numerous circumstances that may interfere with regular active involvement in educational programs. How well were very needy families able to participate in the services that were offered to them?

In terms of extent of participation, the results are encouraging. Very needy families attended adult and parenting education activities more often than did less needy families (Exhibit 6.15). Children from very needy families were more likely to participate for ten to twelve months (25 percent) than children from less needy families (21-23 percent). (All these differences were statistically significant.)

Exhibit 6.15: Annual Hours of Participation in Adult and Parenting Education, by Family Need Index (1996-97)

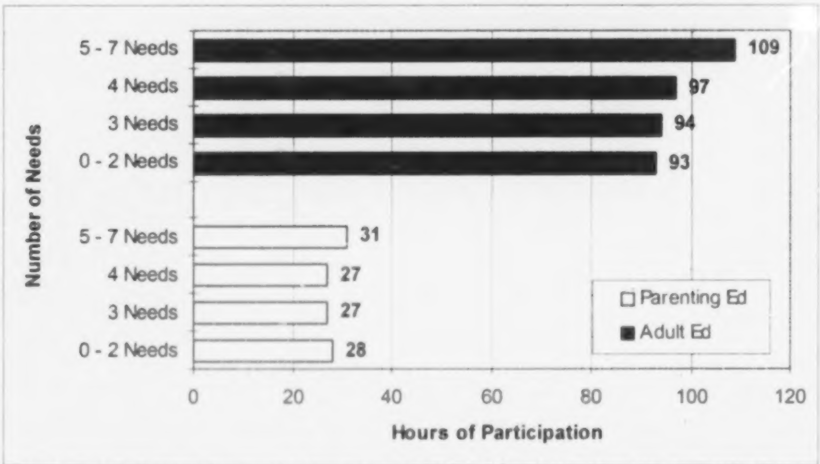


Exhibit reads: In 1996-97, parents in families with five to seven need indicators participated on average 109 hours per year in adult education and thirty-one hours per year in parenting education—significantly more than parents in families with fewer needs.

Despite their greater number of disadvantages, the rate of participation in all core service areas by the very needy families exceeded the rates of less needy families. To assist families in maintaining this level of participation in spite of multiple difficulties, projects provided a greater number of support services to families with five or more needs (on average 3.3 types of services) than to families with little or no special needs (2.6 types of services).

These results all point toward tremendous efforts on the part of very needy families and project staff to accomplish the participants' goals against many odds. Data on the year-end status, however, shed further light on the plight of the very needy families. Despite their greater hours of participation, a lower percentage of families with four or more needs completed their educational goals (5 percent) than families with fewer needs (7-9 percent). Further, somewhat fewer very needy families were continuing at year-end (56 percent), compared to less needy families (58-63 percent) (Exhibit 6.16).

Given that very needy families were less likely to complete the program or to continue participation, what were the reasons for their termination from the program? About the same percentages of very needy and less needy families left the program due to new employment and family crises and conflicts. The very needy families were somewhat more likely to be terminated due to low motivation and attendance than less needy families (10 percent versus 7 percent, respectively). These patterns of findings have been replicated each year since 1994-95.

These findings highlight the difficulty and the importance of assisting the very needy families to maintain full participation. The very needy families did receive more support services than less needy families. These services must be

BEST COPY AVAILABLE

sustained to prevent families from becoming discouraged by multiple barriers that stand in the way of achieving their goals.

Exhibit 6.16: Percent of Families, by Number of Needs and Year-end Status (1996-97)

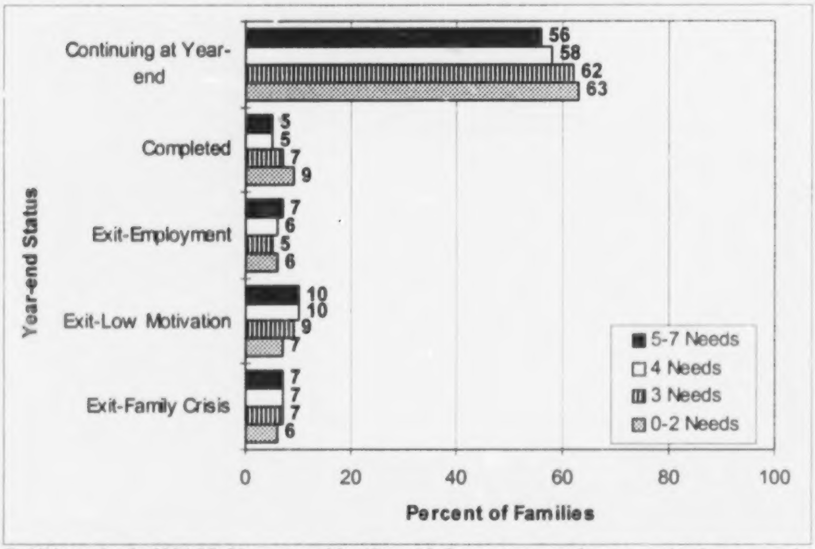


Exhibit reads: In 1996-97, 56 percent of families with five to seven needs were retained at year-end, compared to 58-63 percent of less needy families.

SUMMARY OF PARTICIPATION RATES FOR OTHER PARTICIPANT GROUPS

Regular, active participation is a necessary step toward achieving Even Start program goals—both for participating families and for projects. We conclude this chapter with a summary of key participation results for three additional groups of participants: families in which the participating parent entered Even Start with a 6th-grade or less education; families in which the participating parent had limited English proficiency; and families with teen parents. These family characteristics overlap (e.g., low education and limited English proficiency); however, grouping families by these characteristics portrays different profiles of family strengths and difficulties that affect participation patterns.

On average, parents with little formal education participated in Even Start activities at the national average level. Although their completion rate was significantly lower than the national average, their continuation rate was somewhat higher than the national level, suggesting that they are remaining in the program to make up for their educational limitations more than parents who entered with more education (different rates of program completion are accounted for in this analysis) (Exhibit 6.17). Parents who have little or no English proficiency also present a similar participation pattern (many of these parents also have limited education), with the average completion rate of 3 percent.

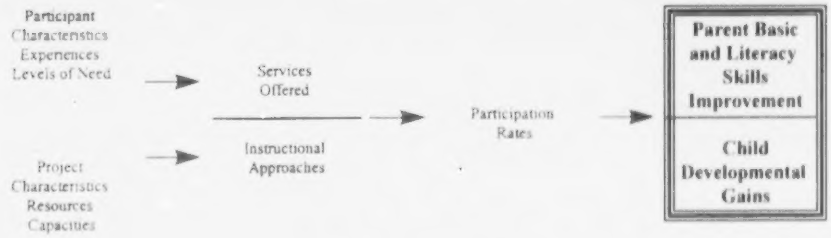
Exhibit 6.17: Year-end Participation Results of Various Participant Groups (1996-97)

		Parent Characteristics		
Participation Measures	All Families	6th Grade or Less Education	Limited English Proficient	Teen Parents
Hours/year participation in adult education	96 hours	99 hours	106 hours	139 hours
Hours/year participation in parenting education	28 hours	27 hours	29 hours	28 hours
Participation in all core services	93%	93%	92%	94%
Year-end continuation rate	56%	65%	65%	57%
Completion rate	7%	1%	3%	9%

***Exhibit reads:** In 1996-97, teen parents participated in adult education an average of 139 hours for the year.*

The teen parents' participation hours in adult education were much higher than the national average, reflecting the fact that many teen parents are finishing their compulsory high school education. Further, their completion rate was slightly higher than the national average.

CHAPTER 7: WHAT ARE THE EDUCATIONAL AND DEVELOPMENTAL OUTCOMES?


Participant Characteristics Experiences Levels of Need
Project Characteristics Resources Capacities
Services Offered
Instructional Approaches
Participation Rates
Parent Basic and Literacy Skills Improvement
Child Developmental Gains

This chapter begins by summarizing the educational and developmental outcomes of Even Start as found in the current study and, where relevant, in the first national evaluation. As described earlier in this report, the outcomes generally reflect (unless otherwise indicated) data collected for participants in the current evaluation and more specifically for those participants who remained in Even Start long enough to participate in at least two rounds of data collection (e.g., pretest, posttest, and/or follow-up).[90]

It is important to note that the Sample Study component of the current evaluation depended upon local projects administering child and adult tests and submitting data on outcome measures. Staff from all Sample Study projects were initially trained in late summer 1994, and did not participate in any other training. In each of the following two program years, the continuing projects received a manual documenting the procedures for test administration. Many projects worked hard to ensure that the annual data collection procedures and submission were carried out smoothly and accurately, yet the quality of the data submitted by local projects was extremely variable. This reflects staff changes at the project level, both among the individuals responsible for test administration (either Even Start or collaborating agency staff) and those responsible for submitting annual data. Another characteristic of Sample Study data is that the number of families per project for whom we had valid outcome measures ranged from 3 to over 100. The combined effect of these caveats is that we must interpret our findings with considerable caution because the data may not capture the impact of participation in Even Start as accurately as we had hoped.

Also, as described in Chapter 2, when we contrasted demographic and other characteristics of those families for whom we have both pretest and posttest data (or those with multiple waves) to those families with only pretest data (or those

---

[90] For the purpose of characterizing baseline status on several outcome measures, we do report pretest or entry scores (or wave one) for participants for whom we may not necessarily have posttest or followup scores (or multiple waves).

BEST COPY AVAILABLE

with only one wave), we observed significant differences between these two groups. Specifically, families with multiple waves of data are more likely, on average, to be employed, have higher incomes, and speak languages other than English at home. Families with multiple waves also are less likely, on average, to be headed by single parents. Mothers in the multiple wave group have, on average, completed nearly one more year of schooling than mothers with only pretest data. As a result of these systematic differences, the results we describe below reflect a bias in favor of continuing participants who, on average, may have more experience with education and who may well have greater supports in the home. *What this means for our analyses of data from the Sample Study participants is that we may well be overestimating the effects of participation in Even Start. This important caveat should be held in mind when reviewing this chapter and subsequent sections of this report.*

We focus first on the current study and present a detailed discussion of outcomes for children, followed by outcomes in parenting education, adult education, and other types of progress indicators such as attainment of a GED and improvement in employment status.

In the current evaluation, information on educational and developmental outcomes for Even Start participants was collected from nearly 1,700 families participating in the forty-seven projects that continued to participate in the Sample Study in 1996-97 (described in more detail in Chapter 2).[91] Data were collected for the 1994-95, 1995-96, and 1996-97 program years. Across all three program years, projects offered, on average, about ten months of instructional service.[92] The findings described in this chapter summarize what we have learned about two different cohorts: families who entered Even Start in the fall of 1994 and families who entered in the fall of 1995 (Exhibit 7.1). For each group of families, we have information on outcome measures collected over a potential period of up to two years of program participation; in general, we have pretest scores, posttest scores (valid only when pre- and posttest administrations are separated by at least three months for the Preschool Inventory and two months for all other measures), and follow-up scores (also only valid with the same guidelines on test administration dates).[93]

---

[91] We received data from only forty-seven projects for the 1996-97 program year. We include data, however, from the fifty-three projects that had submitted data for the previous program year. The other Sample Study projects were no longer operational or had fulfilled their obligations to the Sample Study by completing the required waves of assessments on families.

[92] The most recent re-authorization of Even Start requires projects to provide year-round services, with some services occurring during the summer months.

Exhibit 7.1: Sample Study Participants and Assessment Schedules: Family Level

	Number of Families		
Program Year	**Pretest**	**Posttest 1**	**Posttest 2**
1994-95	896	527	4
1995-96	869	534	172
1996-97		73	101

Note: Generally, while families who participated in the Sample Study were administered pretests within a thirty-day window of enrollment, the amount of time between wave one and subsequent waves varied considerably. As a result, we included only those families for whom the amount of time between waves one and two exceeded at least two months, which is generally held to be a minimally acceptable amount of time. We exercised the same minimum cutoff for the amount of time between waves two and three.

The numbers for each program year are not mutually exclusive—families that were posttested in 1995-96 could include those who were pretested in 1994-95 as well as those who were pretested in 1995-96.

Exhibit reads: In program year 1995-96, 869 families were pretested, 534 families were posttested, and 172 families were posttested a second time.

WHAT WERE THE CHILD DEVELOPMENT OUTCOMES?

Two measures of children's school readiness and/or development were used in the second national evaluation:

- the PreSchool Inventory (PSI); and
- the Preschool Language Scales (PLS-3).

The PSI was used in the first national evaluation of the Even Start program, and the PLS-3 was chosen for this evaluation to replace the Peabody Picture Vocabulary Test-Revised Edition (PPVT-R), which was used in the first evaluation.[94] (For a summary of the content validity of the child development outcome measures as well as the adult outcome measures, please refer to Appendix D.) Each measure is described in more detail below.

---

[93] Most of the findings reported in this chapter (and in Chapter 8) are based on pretest and posttest data collected across two program years—1994-95 and 1995-96, with some additional data collected during the 1996-97 program year. While we do have limited wave three data on some measures for children, there are so few adults (generally under 15 percent of those with two waves of data) that we base the majority of our analyses on difference scores between waves one and two. We report statistical significance and difference scores as indicated throughout this chapter.

[94] The Peabody Picture Vocabulary Test-Revised was replaced for two reasons. First, results from the first national evaluation found few differences between Even Start and comparison children, and because it seemed as though the PPVT was not sensitive to participation in Even Start, it seemed to have limited effectiveness as a measure of the impact of participation in the Even Start program. Second, because the test assesses only receptive vocabulary, we sought to replace it with a measure that is also sensitive to children's expressive vocabulary.

DESCRIPTION OF THE PSI

The PreSchool Inventory (PSI) was developed by Bettye Caldwell as a sixty-four-item inventory of basic concepts important for preschool children to know before entering school (CTB/McGraw-Hill, 1970). A thirty-two-item version has been adapted (Abt Associates Inc., 1991) for use in large-scale evaluations.

The PSI is an individually administered measure that assesses a range of school readiness skills such as identifying shapes and colors and understanding numerical concepts. The PSI requires fifteen minutes to administer and is appropriate for children between the ages of 3 and 5 years. English and Spanish versions of the test are combined on a single form. Each correct item counts as one point, and a total score is computed. The PSI contains no subscales.

The thirty-two-item version of the PSI has been used in numerous large-scale evaluation studies, including: the observation study of Chapter 1 preschool programs (Seppanen et al., 1993); the evaluation of Project Giant Step (Layzer, Goodson, and Layzer, 1990); the National Day Care Study (Bache, 1980); the Head Start Planned Variation study (Walker, Bane, and Bryk, 1973); the National Home Start Evaluation (High/Scope Educational Research Foundation, 1973; 1975); and the Child and Family Resource Program evaluation (Travers et al., 1982).

The PSI was developed to be sensitive to instruction and has shown positive effects of preschool programs in previous research, but since it does not have national norms, we cannot compare the performance of children in Even Start to any norming sample. The psychometric characteristics of the test have been investigated extensively.[95] In the Sample Study, the PSI was administered to children between the ages of 3 and 5 years who were expected to participate in early childhood education. The test was administered to children by program staff or staff they designated (e.g., local evaluator, staff from collaborating agency). Project staff were trained to administer the test in the summer of 1994.

Administration rules for the Sample Study were that for Cohort 1 families entering in the fall of 1994, the test was to be given at entry (in the fall of 1994), again in the spring of 1995 (or at the time of exit from Even Start), and once again in the spring of 1996 (or at exit). Similarly, for families entering in the fall of 1995 (Cohort 2), the test was administered in the fall of 1995, again in the spring of 1996 (or at the time of exit from Even Start), and once again in the spring of 1997 (or at exit). Project staff were asked to administer the PSI as a pretest within thirty days of the start of services to serve as a baseline. Staff were asked to administer posttests with a minimum of three months between pretest and posttest dates. These were the same rules of administration as used in the first national evaluation. Staff recorded the PSI raw score, the test date, and the language of administration. We have wave one data for over 1,000 children, wave two data for over 650 children, and three waves of PSI scores for over 150 children.

---

[95] The reliability of the measure has been assessed in each of the studies cited above, with Cronbach's alpha ranging from .77 to .87. Test-retest reliability ranged from .67 to .77. In the first Even Start evaluation, the reliability of the PSI, as assessed via Cronbach's alpha, was .86.

DESCRIPTION OF THE PLS-3

The Preschool Language Scales (PLS-3) was selected for this evaluation to replace the Peabody Picture Vocabulary Test-Revised (PPVT-R) used in the earlier evaluation in order to obtain more detailed information about children's language development. The PLS was first developed in 1969 to assess the language development of young children, based on information about language development from the fields of psycholinguistics, human development, and speech-language pathology (Zimmerman, Steiner, and Pond, 1992). The measure can be used with children as young as 2 weeks and as old as 7 years.

The PLS-3 measures both receptive and expressive language skills and provides scores on two subscales (auditory comprehension and expressive communication) in addition to a total score. The auditory comprehension subscale assesses children's ability to process and understand language they hear, including skills in the areas of the meaning of words and concepts (content), the structure of language and syntax (form), and integrative thinking skills. The expressive communication subscale evaluates children's ability to produce language, including skills in vocal development, use of words and concepts (content), syntax (form), and integrative thinking skills.

The version of the test used in the Sample Study was revised in 1992. The test was standardized on a sample of 1,200 children, with equal numbers of males and females within each age range. The nationally representative sample was stratified on the basis of parent education, geographic region, and race/ethnicity.[96] The PLS-3 takes approximately thirty to forty minutes to administer and is available in English and Spanish. Raw scores are converted into standard scores based on the age of the child; national norms and age-equivalent scores also are available.

In the Sample Study, the PLS-3 was administered to children between the ages of 2 years, 6 months and 5 years, 6 months at the time of the pretest and who were expected to participate in early childhood education. The test was administered to children by program staff or staff they designated (e.g., local evaluator, staff from collaborating agency). Project staff were trained to administer the test in the summer of 1994. We have wave one data for over 1,000 children, wave two data for over 700 children, and three waves of PLS-3 scores for over 150 children.

---

[96] Test-retest reliability coefficients range from .82 to .94, depending on the subscale and the age of the child. The interrater reliability was found to be .89. Reliability coefficients in this range are considered to be quite good.

PERFORMANCE ON THE CHILD DEVELOPMENT OUTCOME MEASURES

Over the course of the Sample Study, we had hoped to be able to collect data from families over the span of up to two program years—once at entry into the program, a second time later in the same program year, and a third time in the subsequent program year. Relatively few families (in the Sample Study projects) remained for a long enough time, however, to have participated in all three waves of data collection. As noted above, we have one score for over 1,000 children; we have a second score for over 650 children, and a third score for approximately 150 children (the actual numbers differ somewhat for the PSI and the PLS-3 due to different age eligibility criteria). In our discussions below, we use information obtained from all children with valid test score data to describe the trajectories of Even Start participants' PSI and PLS-3 test scores over time.[97] (Refer to Appendix D for more detailed information on pretest scores.)

---

[97] Because the number of children varied so widely—from as few as three to as many as 118 in one project—we elected to limit the maximum number of records from an individual project to fifty, in order to minimize extreme leverage of a single project. Consequently, we randomly selected fifty child-level observations from the one site with 118 observations.

We encountered some missing data in estimating these models. For example, for two of the three substantive predictors (need index and mother's education), we were missing data for approximately 10 percent of the children. Rather than set these cases aside from analysis, we used Cohen and Cohen's (1982) approach to this problem (see also, Hedeker and Gibbons, 1997). For each child who was missing a predictor value, we imputed the mean value for all non-missing individuals. We then created a missing data flag for the predictor to indicate whether the value for the variable was real or imputed. When we used the predictor in any statistical analysis, we entered both the predictor itself and its missing data indicator as well. This approach allows the researcher to include *all* cases in the analysis, while not allowing the imputed value to affect the parameter estimates for the non-missing cases. As illustrated in both the tables summarizing our model-building, the missing data indicator was never statistically significant, indicating that there were no mean differences between those individuals with missing values of these predictors and those who had valid data.

ANALYTIC TECHNIQUES

To investigate changes in children's test scores over time, we fit a series of individual growth models (Diggle, Liang, and Zeger, 1994; Willett, 1988). These models, which can be viewed as a special case of hierarchical linear models (Bryk and Raudenbush, 1992), multilevel models (Goldstein, 1995), and random coefficient models (Longford, 1993), allowed us to examine changes in children's test scores over time on both the Preschool Inventory (PSI) and the Preschool Language Scale-3 (PLS-3) while taking into account the statistical concern that multiple measures on the same children over time are not statistically independent. Another advantage of the growth modeling approach (over traditional repeated measures analysis of variance models) is that models can be fit to data structures, like this one, in which each individual has his or her own unique data collection schedule. The number of waves can vary across individuals and the spacing of the follow-up waves need not be identical either. Given that the number of observations per child varied from one to three and the spacing of the multiple measurements varied as well, individual growth models represented the method of choice for examining how children grow and develop during their participation in Even Start.

Individual growth models can be expressed in at least three different yet totally equivalent ways: (1) by writing separate within-person and between-person models; (2) by writing separate equations at each level and then substituting to arrive at a single equation; and (3) by writing a single equation that specifies the multiple sources of variation. Although all three methods are equivalent, in what follows, we have chosen the third approach because it highlights a particular feature of individual growth models that we think is especially important for understanding how these models represent data on individuals over time: by expressing each individual's score as a function of some fixed effects—effects assumed to be identical across people—and some random effects—effects assumed to vary across people.

In fitting these models, we sought answers to three linked sets of questions:

- How consistent are individual children's scores over time? Do they remain the same, increase, (or in the case of the PLS-3, in which we were limited to studying their scores over time measured using standard scores, do they decrease)?
- What factors are associated with children's scores near the beginning of participation in Even Start? Do children's early test scores vary as a function of maternal education or level of family need?

- What factors are associated with children's growth during participation in Even Start? Is growth systematically related to maternal education, level of need, or how long the child participated in the program?[98]

The results for the PSI are presented in Exhibit 7.2 and the results for the PLS-3 are presented in Exhibit 7.3. All models were fit using the procedure PROC MIXED in SAS (Singer, in press). Before turning to the specific substantive results, we first describe our approach to building the statistical models.

APPROACH TO MODEL BUILDING

For each measure, we began by fitting what is known as the "unconditional means model," a model with no substantive predictors (see, e.g., Bryk and Raudenbush, 1992). In the unconditional means model, child j's score on the outcome Y on occasion i (i.e., Y_{ij}) is expressed as the sum of two components:

$$Y_{ij} = \beta_{00} + [u_{0j} + r_{ij}]$$

where u_{0j} is assumed to be normally distributed with mean 0 and variance τ_{00} and r_{ij} is assumed to be normally distributed with mean 0 and variance σ^2. In this model, β_{00} is a fixed effect, which measures the average test score for the average child; u_{0j} is a random effect associated with child j, and r_{ij} is the within-child random effect that reflects the occasion to occasion variation in the child's test scores. Shown in each table as "Model 1," the unconditional means model served two purposes. One, it provided baseline estimates of variance components (τ_{00} and σ^2) which we then used to evaluate the fit of subsequent models, and two, it allowed us to estimate the intraclass correlation for each outcome, an indicator of the degree of consistency in individual children's test scores over time.

We then fit a set of "unconditional growth models" in which we expressed each individual child's test score data as a function of time. For example, the second model we fit for each measure (Model 2) was the unconditional linear growth model:

$$Y_{ij} = \beta_{00} + \beta_{10}(AGE_{ij} - 36) + [u_{0j} + r_{ij}]$$

where the u_{0j} are still assumed to be normally distributed with mean 0 and variance τ_{00} and r_{ij} are still assumed to be normally distributed with mean 0 and variance σ^2. Notice that in writing this model, we have not entered the child's age directly, but rather have subtracted the child's age in months from the value 36. Because of this subtraction, known as "centering," we are able to interpret β_{00} as the average child's test score at 36 months. Had we not centered age at a substantively meaningful value, the parameter β_{00} would have been more difficult to interpret, as it would have represented the average child's test score at age 0 months, an obviously meaningless point in time. (For a discussion of centering, and its effects on multilevel models, see Kreft, de Leeuw, and Aiken, 1995.)

---

[98] Because there are so few fathers in the Sample Study (under 1 percent) with any education history data, we refer to the education level of the parent as "maternal education."

Fitting the series of unconditional growth models served two purposes: (1) it allowed us to select a functional form for modeling growth over time (to decide whether the linear model above was sufficient, or whether a quadratic or even cubic model was needed); and (2) to determine whether two random effects in the model were sufficient (the $\boldsymbol{u}_{0j}$ and the $\boldsymbol{r}_{ij}$) or whether we should also allow the growth rates to vary randomly across children, by adding another random effect $(\mathrm{AGE}_{ij}\text{-}36)\ \boldsymbol{u}_{ij}$. When modeling the PSI, we found that a linear growth model was preferred; when modeling the PLS-3, we found that a quadratic model fit better than a linear model. For both measures, we found no evidence to support allowing the growth rates to vary randomly across children. In all subsequent models we therefore constrained the growth rates to be fixed (as in the above equation).

Having decided on an unconditional growth model for each measure—a linear model for the PSI and a quadratic one for the PLS-3, each with random intercepts and fixed slopes—we then fit a series of conditional growth models, in which we investigated the effects of three substantive predictors. Following the advice of many experts in multilevel modeling and individual growth modeling (e.g., Bryk and Raudenbush, 1992; Kreft and de Leeuw, 1998), we restricted attention to a very small number of predictors: (1) the number of waves of measurement (one-wave vs. multi-wave); (2) maternal education; and (3) the need index.[99] In investigating the effect of each predictor, we evaluated its main effect—its effect on the child's test score at age 36 months—and its interaction effect—its effect on the growth rate. As we will show, we found that while maternal education had no effect (at least after controlling for need index), there was an effect of both need index and the number of waves of data collection.

---

[99] Although we were interested in the amount of exposure children had to the Even Start program as a predictor, because early childhood education hours mean different things for children of different ages (e.g., the hours for children at 2 years, 5 months and the hours for children at 4 years represent different activities), the values are not equatable over time. Additionally, the data submitted by different projects were highly variable; in some projects, all participating children had identical quantities of received instruction across multiple years. As a result, we could not include amount of exposure directly, and we used wave as a proxy.

Exhibit 7.2: Multi-level Models for Examining Growth Over Time on the PSI

	Models							
Fixed Effects	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Intercept	14.40*** (.24)	4.50*** (.34)	4.55*** (.34)	3.17*** (.44)	6.10*** (.64)	4.29*** (1.0)	7.76*** (.79)	7.03*** (1.37)
Age		0.64*** (.02)	0.64*** (.02)	0.64*** (.02)	0.46*** (.03)	0.46*** (.03)	0.46*** (.03)	0.46*** (.03)
Single Wave				-2.16*** (.42)	1.90* (.76)	1.87* (.76)	1.97** (.75)	1.95** (.76)
A*W					-0.26*** (.04)	-0.26*** (.04)	-0.26*** (.04)	-0.26*** (.04)
Mhigrd						0.17* (.07)		0.05 (ns) (.08)
Grdflag						0.55 (ns) (.64)		
Needindx							-0.50*** (.14)	-0.45** (.16)
Needflag							0.87 (ns) (.86)	0.83 (ns) (1.16)
Random Effects								
T_{00}	19.46	23.28	23.28	24.06	24.76	24.55	24.17	24.23
T_{01}			0.06					
T_{11}			-0.00					
sigma^2	38.00	13.28	13.28	13.23	12.25	12.27	12.29	12.29
Goodness of Fit								
Deviance Statistic	8944	8189	8188	8162	8127	8123	8113	8114
AIC	-4474	-4096	-4098	-4083	-4065	-4064	-4059	-4059

Note: The standard deviation for estimates of fixed effects are included in parentheses below each estimate.

(ns) $p > .05$
* *$p < .05$*
** *$p < .01$*
*** *$p < .001$*

Exhibit 7.3: Multi-level Models for Examining Growth Over Time on the PLS

	Models							
Fixed Effects	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Intercept	87.41*** (.46)	84.68*** (.80)	84.66*** (.80)	87.00*** (.98)	88.05*** (1.08)	86.24*** (1.19)	83.77*** (2.00)	**89.64*** (1.60)**
Age		0.15*** (.04)	0.15*** (.04)	-0.22* (.10)	-0.27** (.10)	-0.12 (ns) (.11)	-0.13 (ns) (.11)	**-0.13 (ns) (.11)**
Age^2				0.01*** (.002)	0.01*** (.002)	0.009*** (.002)	0.009*** (.002)	**.009*** (.002)**
Single Wave					-2.52* (1.13)	2.35 (ns) (1.81)	2.29 (ns) (1.81)	**2.50 (ns) (1.80)**
A*W						-0.32*** (.09)	-0.31*** (.09)	**-0.32*** (.09)**
Mhigrd							0.26 (ns) (.17)	
Grdflag							-0.91 (ns) 1.53	
Needindex								**-0.99** (.32)**
Needflag								**-1.15 (ns) (2.10)**
Random Effects								
T_{00}	109.35	117.78	120.83	117.99	116.34	118.89	118.66	117.54
T_{01}			-1.21(ns)					
T_{11}			.001(ns)					
sigma^2	149.69	143.06	138.24	141.05	141.48	138.81	138.83	138.58
Goodness of Fit								
Deviance Statistic	14204	14192	14187	14186	14179	14170	14166	14157
AIC	-7104	-7098	-7097	-7095	-7091	-7087	-7085	-7080

Note: The standard deviation for estimates of fixed effects are included in parentheses below each estimate.

(ns) $p > .05$
* $p < .05$
** $p < .01$
*** $p < .001$

RESULTS FOR THE PSI

Model 1 of Exhibit 7.2 presents the unconditional means model for the PSI, in which we find that the average child in the Sample Study had an average score of 14.40. More important than the totally expected finding that this mean is significantly different from 0 (as indicated in the fixed effects portion of the table) are the two estimates of the random effects in the bottom part of the table. The estimated variance component for the means (τ_{00}, also known as the variance component for the intercepts) is 19.46 and the estimated variance component within child (σ^2) is 38.00. **The fact that the variance component within child is approximately twice as large as the variance component between children tells us that there is more within-child variation than there is between-child variation.** But this is not to say that there are not consistent differences in PSI scores between children. We can assess this degree of consistency by computing the intraclass correlation, which here is 19.46/(19.46 + 38.00) = .34. This tells us that one third of the variation in children's PSI scores occurs between children.

All subsequent models are built with the goal of explaining some of the variation in the scores within children and between children. The unconditional growth models (Models 2 and 3 in Exhibit 7.2) attempt to explain the variation in children's PSI scores within children over time. Each includes an additional fixed effect reflecting the child's growth over time. The difference between the models is that while Model 2 only has two random effects (as in Model 1), Model 3 adds two additional random effects—for the age slopes (the growth rates) and for the covariance between the intercepts and slopes. Comparing the goodness of fit statistics for these two models reveals a difference in deviance statistics that is so small (approximately 1) for two additional degrees of freedom that there is no evidence that the model with random slopes is to be preferred to the model with fixed slopes (p>.50). Model 2 is therefore preferable to Model 3 because it fits nearly as well and is more parsimonious.

What does the unconditional growth model (Model 2) indicate about the behavior of children's PSI scores over time? The parameter estimate for the fixed effect of the intercept (4.50) tells us that **we estimate the average child in Even Start to score 4.50 on the PSI at age 36 months**. The parameter estimate for the fixed effect of age (.64) tells us that we estimate that **with each additional month, the average child's score is .64 points higher**. Comparing this slope coefficient of .64 to its standard error (of only .02), tells us that **this growth rate is not only "statistically significant"** by all conventional standards (p<.0001), but that it **is also estimated quite precisely**. Multiplying by 12 to yield a predicted annual gain, **we estimate that the PSI score for a randomly selected child in Even Start is 7.68 points higher for each extra year of participation**.

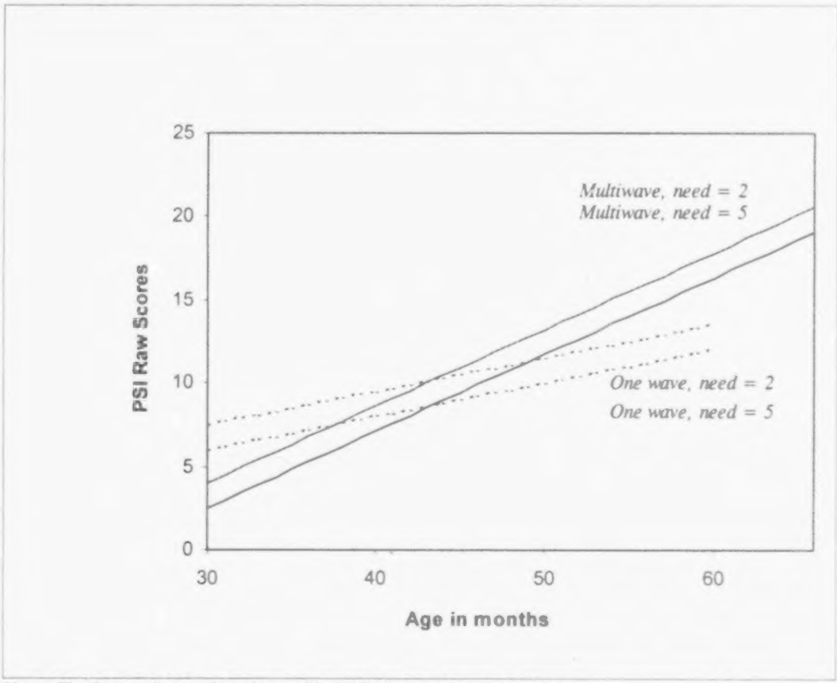
The random effects in Model 2 provide two interesting windows on the behavior of PSI scores both over time and within children. First, we can compare the estimates for the within-child variance components from Model 2 to Model 1 to see how much of the within-child variation is "explained" by age. The original estimate of σ^2 (38.00) has declined to 13.28, a decrease of 65.1 percent ((38.00-13.28)/38.00); this tells us that approximately two-thirds of the within-child variation in PSI scores is attributable to age. Second, we can use these new estimates of the variance components to compute the residual intraclass correlation, a measure of how similar children's test scores are after taking into account the within-child predictor, Age. Using the two variance component estimates in Model 2, we estimate the residual intraclass correlation for the PSI to be 23.28/(23.28+13.28)=.64, telling us that **after we control for child age, nearly two thirds of the residual variation in PSI scores occurs between children**.

All remaining models in Exhibit 7.2 investigate the fixed effects of the three potential predictors. Models 4 and 5 add the variable Single Wave, which contrasts children with only one wave of data collection to those who had multiple waves. (We should note that we also tested whether those with two waves were significantly different from those with three waves, and found no effects.) Model 4 investigates the main effect of this predictor; Model 5 investigates whether the effect of the predictor varies over time (which it does, in a way that will be described shortly). In Model 6, we add the main effect of mother's education (using the two predictors, Mhigrd and Grdflag, as described earlier). In Model 7, we add the effect of need index (also using two predictors, Needindex and Needflag, as described earlier), not controlling for mother's education and in Model 8, we add its effect after controlling for mother's education. In results not shown here, we also tested whether either need index or mother's education interacted statistically with child age, and found no effect. We therefore focus our interpretation of these models on the results for Model 7.

Exhibit 7.4 presents fitted individual growth models for four prototypical children: those with need index scores of 2 (low levels of need) and 5 (high levels of need) with multiple waves of data (the solid lines) and only one wave of data (the dashed lines). To emphasize that the models for the children with multiple waves are longitudinal and therefore really describe growth whereas the models for the children with only one wave are cross-sectional comparisons of children who entered Even Start at different ages, we have graphed the former using solid lines and the latter using dashed lines. **A child who remained in Even Start for two or more waves of data collection grows on the PSI by an average of nearly half a point per month (.46 to be precise) for an annual increase of 5.52 points. For every extra point on the need index, the child's score is an average of .50 points lower.** The growth trajectories for the prototypical children in the plot, who differ by three points on the need index, are therefore separated by 1.5 PSI points.

What does this model tell us about growth in PSI scores over time? Because need index did not interact statistically with Age, we have no evidence that the growth rates for children differ by need. But we do have evidence that the growth rates for children who remain in Even Start longer (and who therefore have additional waves of data collection) are steeper than we would predict, based on the cross-sectional comparisons of children who were in Even Start for only one wave of data collection. We must, however, be very careful with this interpretation. The dashed lines in the graph are not trajectories in that they do not describe the behavior of individual children over time. Instead they simply describe the average PSI scores for Even Start children who were in the program for such a short period of time that they participated in only one wave of testing. We believe that if used with caution, these children may represent a suitable comparison group for evaluating the magnitude of the growth over time for children who remained in Even Start for two or more waves of data collection (the solid lines). With this caution in mind, we see that **children who remain in Even Start longer have steeper growth trajectories than we would have predicted based on the cross-sectional testing data**. The difference in the growth rates for the two groups (.46 for those with multiple waves of data and (.46-.26)=.20 for those with only one wave of data) is statistically significant at the p<.0001 level (as evaluated by the fixed effect for Age*Wave, which remains stable throughout Models 5 through 8). Thus, with the caveat that the children with only one wave of data cannot describe a growth trajectory, **we conclude tentatively that children who remain in Even Start for longer periods of time may grow at a faster rate on the PSI than we would have predicted had they not remained in Even Start**.

Exhibit 7.4: Predicted PSI Scores, by Child Age, in Months



Note: The figure above is based upon Model 7 (displayed in Exhibit 7.2).

FINDINGS FOR THE PLS

The general findings for the PLS-3 closely parallel those for the PSI. **There is evidence that children with multiple waves of data collection have steeper growth rates than we would have predicted based on cross-sectional**

comparisons of children at different ages who have only one wave of testing data. So, too, **children whose families have higher scores on the need index have lower PLS-3 scores** (as they had lower PSI scores).

The fundamental difference between the analyses is that while we were able to model the raw scores on the PSI, because the tests are identical at every occasion of measurement, the same is not true of the PLS. To allow the PLS to be administered validly across a wider range of ages, the test uses somewhat different items depending upon the child's age. We were therefore not able to use the raw scores, and instead we used the standardized scores recommended by the instrument's publisher, The Psychological Corporation.

Because standardized scores theoretically should not change with age at all, the behavior of the measures for the unconditional means model (Model 1 of Exhibit 7.3) and the unconditional linear growth models (Model 2 and 3) differ sharply from those for the PSI. First, in terms of the unconditional means model, we find a higher intraclass correlation across the multiple measures for individual children. Taking the estimated variance components for Model 1 of Exhibit 7.3, we find an intraclass correlation of 109.35/(109.35+149.69)=.42, indicating greater similarity among the multiple measures for each child than we found for the PSI. This is to be expected when using a standardized outcome measure, in that the differences in the scores associated with age (or growth) are expected to be minimal (unless, of course, the children are actually growing on this measure over time—which seems to be happening here, for at least some children). Similarly, because the effects of age are theoretically removed by the standardization, adding the fixed linear effect of Age to the model should have little effect on the size of the within-person variance component (σ^2). Comparing the estimates for this variance component from Model 2 to Model 1, we find a trivial reduction, from 149.69 to 143.06, or 4.4 percent. Contrasted with the 65.1 percent reduction on the inclusion of linear Age in the model for the PSI, we see that taking the child's age at PLS administration into account has very little effect on the residual intraclass correlation, which has increased only slightly to .45.

But it is not as if there is no fixed effect of age in these models. Indeed, not only is the fixed effect of linear age statistically significant (in Model 2), there is also a curvature to this variable's effect (as shown in Model 4).[100] This curvature component—the quadratic term, Age^2—which remains statistically significant in all subsequent models that include the substantive predictors, tells us that the effect of Age on the PLS is not linear. Coupled with the statistical interaction between the linear component of Age and the dummy variable distinguishing individuals with only one wave of measurement from those with multiple waves, we find (as we will soon show), that children who remained in Even Start for two or more data collection occasions do, on average, also grow on the PLS over time.

---

[100] As in the analyses for the PSI, we found no evidence that the effect of Age (either linear or quadratic) varies across individuals. Comparing the deviance statistics for models that allowed the slopes (and separately, curvatures) to vary across individuals revealed no statistically significant differences. We therefore conducted the PLS analyses similarly to those of the PSI, with randomly varying intercepts and fixed slopes.

Before describing this effect in detail below, we describe the remaining models in Exhibit 7.3, which investigate the fixed effects of the remaining two substantive predictors. Model 7 shows that for the PLS, we find no main effect of mother's education; children's PLS scores, on average, are totally unrelated to their mother's level of education. In results not presented here, we also find no statistical interaction between Age and mother's education, indicating that the growth rates for the PLS also are unrelated to maternal education. Model 8, however, shows an effect of need index that is virtually identical to that found for the PSI. Here we see that **for each increment of one point on the need index, children's average PLS scores (at 36 months, the centering value) are .99 points lower**. In results not presented here, we find no statistical interaction between Age and need index either.

We therefore focus our interpretation on Model 8, the results of which are graphed in Exhibit 7.5. Because this test can be administered to children at much older ages than the PSI, the fitted trajectories are drawn from age 30 months through age 84 months. Like the equivalent graph for the PSI, we have chosen to plot the results for four prototypical children: those with need index scores of 2 (low levels of need) and 5 (high levels of need) with multiple waves of data (the solid line curves) and only one wave of data (the dashed line curves). Because the effect of Age on the PLS is quadratic, the trajectories are represented as curves, and not as lines. Because there is an interaction between the linear component of these curves and the presence of multiple waves of data collection, the curves for the two groups of children are dramatically different.

Focus first on the cross-sectional curves for the children with only one wave of data. Although we do find that average scores are lower with increasing levels of need—the curve for the children with a score of 5 on the need index is 2.98 points lower than the curve for the children with 2 on the need index—we do not find any evidence of systematic growth over time. If anything, the children who entered Even Start later (at age 50 months, for example) have somewhat lower scores than those who entered earlier. This suggests that children who enter earlier have higher test scores, on average, than children who enter later.

Next focus on the growth trajectories for the children who remained in Even Start for two or more waves of data collection. At the early ages, there is little difference between the children with only one versus multiple waves of data; in fact, the test of the fixed effect of the variable Single Wave in Model 8 is non-significant, indicating that at age 36 months, we observe no difference in average PLS scores between those with only one wave of data and those with multiple waves. So, too, notice that we continue to have an effect of need index; children with higher levels of need have lower scores, on average. But most importantly, notice the way in which the growth curves for these children escalate over time. **Regardless of the level of need, those who remained in**

Even Start long enough to be eligible for two or more waves of data collection actually grow on the standardized scores on the PLS over time. This growth occurs in the face of two factors which would suggest that no growth should occur: one, we are modeling standardized scores, which theoretically should remain constant over time, and two, for the Even Start children with only one wave of data, we see no parallel age differences.[101] Coupled with the growth evidence from the PSI, this suggests that children who remain in Even Start for longer periods of time may indeed experience growth in outcome measures tapping into the domain of cognitive achievement.

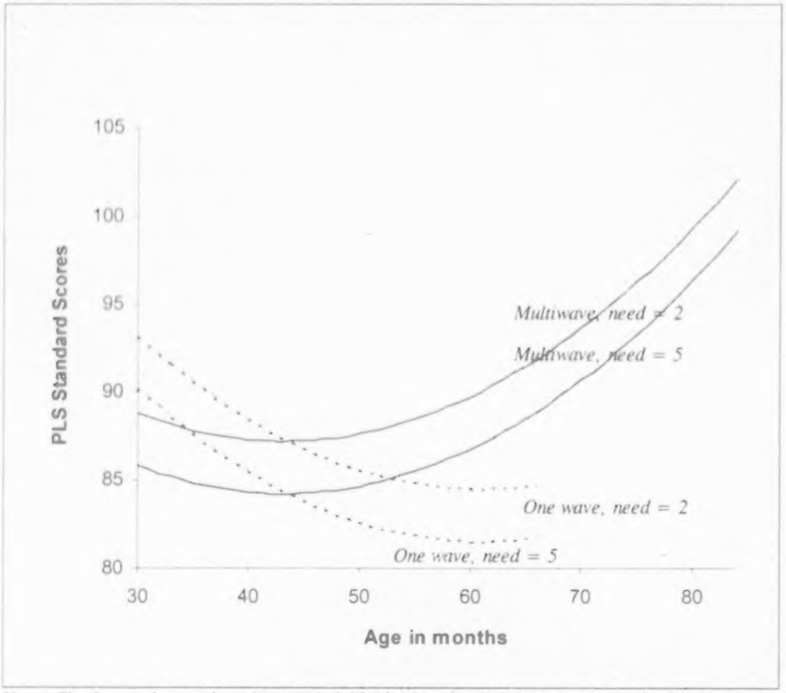
As before, however, we must be very careful with this interpretation. The dashed lines in this graph are not trajectories describing the behavior of individual children over time. Instead they simply describe the average PLS scores for Even Start children who were in the program for such a short period of time that they received only one wave of testing. We believe that if used with caution, these children may represent a suitable comparison group for evaluating the magnitude of the growth over time for children who remained in Even Start for two or more waves of data collection (the solid lines). Thus, with the caveat that the children with only one wave of data cannot describe a growth trajectory, we conclude tentatively that children who remain in Even Start for longer periods of time may grow at a faster rate on the PLS than we would have predicted had they not remained in Even Start.

What do all of these growth curve analyses mean? To summarize, these analyses of children's growth over time on two different measures provide us with credible evidence that children who continue to participate in Even Start make greater gains than one might anticipate based on age or development alone. Our analyses indicate that children progress at the same rate regardless of family need, although children from families with greater needs consistently score lower, on average, than children from families with fewer needs. Further, it is clear that the longer children participate in Even Start, the greater the gain, or the steeper the growth rate. By contrast, the distribution of PLS scores for children who have only one wave of data suggests that the later a child enters Even Start, the lower the score, on average. Our analyses reveal similar patterns for multi-wave children for both measures, the PSI and PLS-3; the fact that we have observed this pattern in the PLS, a standardized measure, provides stronger evidence that participation in Even Start has a demonstrable and positive effect on children.

---

[101] In fact, when we examine the age equivalent scores solely for those children with two or more waves, and compare those scores to the norming population (in other words, to the scores of those children who comprised the population upon whom the test was normed), we can see that the distance between the norming population and Even Start children is decreasing over time. See Exhibit D.2a in Appendix D.

Exhibit 7.5: Predicted PLS Scores, by Child Age, in Months



Note: The figure above is based upon Model 8 (displayed in Exhibit 7.3). A standardized score of 100 represents an average score for an average child, regardless of age.

WHAT WERE THE PARENTING OUTCOMES?

Outcomes for parenting education were assessed by the HOME Screening Questionnaire (HSQ) (Coons et al., 1981), which replaced the set of questions about parent-child activities and the home environment contained in the first Even Start evaluation. The selection of new measures for assessing parent-child interactions reflected concern about participant and project-level burden, as well as concern that measures used in the first evaluation did not adequately assess the behaviors of most interest to Even Start. The parent-child interview used in the first study suffered from high pretest means on some sub-scales and small gains on most sub-scales. Although the interview from the first evaluation was based on three key measures including the HOME, staff identified questions that required rewording and asked for guidelines for excluding families based on the age of the child. The quality of local administration in that evaluation was highly variable. Given these problems and based on recommendations from the first Even Start evaluation's Advisory Panel, we decided to assess parenting skills by replacing the questions used in the first evaluation with the HSQ.

HOME SCREENING QUESTIONNAIRE

The HSQ is a survey version of the Home Observation for Measurement of the Environment (HOME; Caldwell and Bradley, 1984), which can be administered either in the home or in a center. The HSQ covers many of the same topics as the HOME but gathers data through parent self-report rather than direct observation.

The HOME is an accepted measure of the quality of cognitive stimulation and emotional support provided to the child by the family. Based on observation of the home environment during a visit to each family's residence, it includes some open-ended interview items and requires more than an hour to complete. The HOME has been widely used in large-scale research studies; scores on the HOME are related to concurrent child performance on standardized cognitive measures and to later academic performance. Psychometric analyses indicate that the HOME has adequate reliability.

Researchers at the University of Colorado Medical School developed the HSQ in an effort to offer a briefer instrument that taps similar constructs with simpler data collection requirements. The HSQ is a parent-answered questionnaire written at a 3rd- or 4th-grade level. It consists of multiple choice, fill-in-the-blank, and yes/no questions and takes fifteen to twenty minutes to complete. The HSQ scoring was standardized on a sample of 1,500 low-income families. Psychometric studies have shown that the HSQ is highly correlated with the HOME total score.[102]

Two forms of the HSQ are available, based on the age of the child: birth up to 3 years and 3 to 6 years. The instrument for younger children has thirty items and a toy list, while the instrument for older children has thirty-four items and a toy list. An administration manual provides rules for scoring each item to yield a total score. Total scores range from zero to forty-three on the form for younger children and zero to fifty-six on the form for older children. Both forms were translated into Spanish by Abt staff.

In the Sample Study, the HSQ was administered to one parent per family by Even Start staff. The questions were asked in reference to one child in the family; if two or more children were expected to participate in Even Start, staff were asked to select the child expected to have the greatest involvement in the program.[103] Project staff were trained on the HSQ during the summer of 1994.

---

[102] Test-retest correlations for the HSQ over the two weeks time range from .62 to .86 with internal consistency coefficients between .74 and .80 (Frankenburg and Coons, 1986).

[103] This method of selecting children for the HSQ represents a limitation in the data collection forms because the forms allow reporting only for one child. Consequently, the HSQ scores may be biased.

A total score was calculated and used in the analyses reported here; information on individual item scores was not obtained.

PERFORMANCE ON HSQ

For the parents of children less than 3 years of age in the Sample Study, the average pretest on the 0-3 version of the HSQ was 30.1, with a standard deviation of 7.2 (see Appendix D, Exhibit D.3). Pretest means for all parents (whether or not those parents were also posttested) increased for those parents who had completed additional years of education, as might be expected. The average scores also were somewhat higher for parents whose primary language is English (30.0) than for parents whose first language is not English (27.7). A larger group completed the HSQ about a child between 3 and 6 years of age. Among this group, the average pretest score was 35.1, with a standard deviation of 7.6 (see Exhibit D.4 in Appendix D). As is the case with parents of younger children, parents with more education and parents whose primary language is English tended to score higher on the measure.

The average amount of time between pretest and posttest was approximately seven months. Among parents whose children were less than 3 years old, there was a gain of 3.6 points from pretest to posttest, corresponding to a standardized gain of .62 (Exhibit 7.6). A nearly identical gain (3.5 points) was observed for parents of older children, which corresponds to a standardized gain of .50. Both gains are considered moderate for program evaluations in the social sciences.

Exhibit 7.6: Pretest and Posttest Scores on the HSQ (Raw Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

Version of the HSQ	n	Pretest		Posttest		Gain	Std. Gain
		Mean	S.D.	Mean	S.D.		
0-3 years	136	28.7	5.8	32.4	5.2	3.6*	.62
3-6 years	379	34.4	6.9	37.9	6.7	3.5*	.50

**statistically significant, p<.05*

***Exhibit reads:** 136 families with children less than 3 years had both pretest and posttest scores on the HSQ. These families gained an average of 3.6 points on the HSQ, which translates into a standardized gain of .62 standard deviation units, and which is statistically significant at the p<.05 level.*

We explored associations and relationships between the HSQ and key predictors, using simple correlations first and subsequently building simple and multiple regression models. We examined the relationship between the HSQ and such predictors as the amount of parenting education hours, amount of parent and child joint time, family need index, and project staff characteristics (e.g., number of families served during program year, number of staff, percent of staff with BA or higher degree, staff-to-family ratio, and staff experience). We found that only pretest score remained a significant predictor of gain score, for both versions of the HSQ. Pretest scores account for 30 percent of the variation in gain scores for the parents of children between 0 and 3 years of age, and for 20 percent of the gain score for parents of children between 3 and 6 years of age. The regression coefficients for these (and all adult outcome measures) are displayed in Exhibit 7.7, and a table displaying correlation coefficients is displayed in Appendix D, Exhibit D.9.

Exhibit 7.7: Selected Regression Coefficients for Parenting and Adult Outcome Measures

	Outcomes (Posttest Scores)					
	HSQ 0-3	**HSQ 3-6**	**CASAS-Reading**	**CASAS-Math**	**TABE-Reading**	**TABE-Math**
Predictors	n=137	n=383	n=114	n=91	n=245	n=229
Pretest Score	-.49(.07)***	-.37(.04)***	-.18(.03)***		-.21(.03)***	-.20(.03)***
# Hrs Adult Ed						-.09(.03)***
# Adult Ed Instructors					3.36(1.23)**	
% Adult Ed Instructors with BA +				9.39(2.39)**		22.58(9.9)*
R^2	.30***	.20***	.20***	.14**	.21***	.18***

**statistically significant = p<.05*
***statistically significant = p<.01*
****statistically significant = p<.001*

Note: The results displayed above represent selected parameter estimates (with standard deviations in parentheses) for simple and multiple regression models predicting posttest scores for the parenting and adult education measures.

GAINS COMPARED TO OTHER STUDIES

The gains on the HSQ are encouraging, and are larger standardized gains than were generally seen for the parent-child items in the earlier Even Start evaluation. Although there is no control group or norms group for the HSQ, one way to assess the size of these gains is by comparing them to the gains observed for the control group in a separate evaluation of a very large demonstration program for low-income families. The Comprehensive Child Development Program (CCDP) is a family-support, two-generation program supported with federal funds from the Administration on Children, Youth and Families within the U.S. Department of Health and Human Services. As part of the national CCDP evaluation, the HSQ was administered to a sample of low-income control group parents when their children were 18 and 30 months of age. In the control group, the HSQ scores were virtually identical for children when they were 18 months as they were for the same children at 30 months of age (the mean scores were 20.8 and 20.2, respectively).[104] These scores suggest that we might not expect any "normal or developmental" growth over time in the HSQ scores for low-income families. They further suggest that the changes observed in the HSQ scores for Even Start families may be attributable to participation in Even Start, rather than to other factors.

---

[104] HSQ scores for CCDP control group children were obtained from age-specific assessments (i.e., when the children were 18 months and 30 months of age), while HSQ scores for Even Start children were obtained at specific points during the program year, regardless of the child's age. As a result, the scores are not directly comparable across the two studies.

WHAT WERE THE ADULT EDUCATION OUTCOMES?

Projects in the Sample Study have been able to choose either the CASAS or the TABE as a measure of adult math and reading skills. Projects could choose either one or both measures to assess their adult participants' progress. The choices reflected a match between the test and the curricular orientation of their adult education programs (e.g., the CASAS may be a better fit for projects that emphasize functional literacy while the TABE represents a better fit for projects that offer a more academic or GED preparation emphasis). Some projects chose to administer different tests to different students based on their skill levels (CASAS for lower level students, TABE for more advanced students). Giving projects the option to administer either the TABE or the CASAS represents a change from the earlier Even Start evaluation, as does the addition of the math tests (for both CASAS and TABE). Only the CASAS reading test was used in the first evaluation.

COMPREHENSIVE ADULT STUDENT ASSESSMENT SYSTEM (CASAS)

The Comprehensive Adult Student Assessment System (CASAS) is an adult-oriented functional assessment system that measures a broad range of adult literacy skills and their application in real-life domains, including consumer economics, government and law, occupational knowledge, community resources, and health (Rickard et al., 1990). For this evaluation, projects administered the CASAS Life Skills tests in both reading and math.

The CASAS has the flexibility to measure participants involved in diverse adult education programs, spanning the range from non-readers to adults at the high school level. An untimed paper-and-pencil test, each CASAS Life Skills test may take as long as sixty minutes to complete. The CASAS has been used with adult education learners in twenty-seven states. The test is used in adult education and job training programs with both native and non-native English speakers. The CASAS has been used in the National Evaluation of Adult Education Programs (Development Associates, 1992), in the evaluation of California's GAIN program (CASAS, 1990), and in the evaluation of California's 321 adult education programs (CASAS, 1991).

CASAS scores range from 150 to 260. Scale scores link the levels into a continuous scale of achievement. The test developers suggest the following interpretation of CASAS scale scores:

Beginning literacy (below 200): Adults scoring below a scale score of 200 have difficulty with the basic literacy skills needed to function in an employment setting and in the community. While these adults can handle routine entry-level jobs, they may have trouble following simple directions and safety procedures.

Basic literacy (200 through 214): Adults scoring between scale scores 200 and 214 can function in entry-level jobs that require only minimal literacy skills. They can complete simple application forms.

Intermediate literacy (215 through 224): Adults scoring between scale scores 215 and 224 are able to perform basic literacy tasks in an employment setting. They are generally able to function in jobs or job training that involves following written instructions and diagrams, although they usually have trouble following complex sets of directions.

High school literacy (225 and above): Adults scoring above a scale score of 224 can usually perform work that involves written directions in familiar and some unfamiliar situations. They generally can function at a high school entry level in basic reading. If they do not have a high school diploma, they can benefit from instruction in GED classes and have a high probability of passing the GED test in a short time.

Sticht (1990) found these interpretations to be reasonable and reported general correspondence between CASAS scale scores above 225 and the 9th- to 12th-grade reading levels on the Tests of Adult Basic Education (TABE) and the Adult Basic Learning Examination (ABLE).

There are only minimal data on the psychometric characteristics of the CASAS. A correlation of .70 between the CASAS reading test and the ABLE was reported in unpublished data. In the earlier Even Start evaluation, using data from the NEIS, an estimate of test-retest reliability was calculated using the correlation between pretest and posttest scores for adults who were posttested less than ninety days after the pretest. The correlation was .86, suggesting that the CASAS is a reliable measure. The true test-retest reliability may be even higher since this estimate is based on data using alternate forms of CASAS tests.

In the Sample Study, Even Start staff administered the CASAS Life Skills tests in reading and math. Each test has four levels, A through D, with twenty-four to forty items per level and alternate forms of each level. Staff administered a short "appraisal" test to assist in identifying the appropriate level of the CASAS. There is no Spanish version of the CASAS, and project staff were instructed to administer the sample items on the appraisal test to determine whether adults had enough ability in reading English to take the test. If an adult was not given the test due to limited English proficiency, this was noted on the ESIS form.

PERFORMANCE ON THE CASAS

Because we have relatively little additional information on adults from the 1996-97 program year, the findings reported below (on pretests as well as pretest-to-posttest gains) are quite similar to what was reported in the 1996 Interim Report. The average pretest scale score on the CASAS reading test was 226, with a standard deviation of 19.6 (see Appendix D, Exhibit D.5). This score corresponds to what CASAS terms an "Advanced Basic Skills" level, which means that the test taker is capable of managing most routine literacy tasks, and test takers at the high end of this range are ready to begin GED preparation. Pretest means increased as the parents' education level went up, from 186 for parents with less than a 5th-grade education to 229 for parents with some high school. The small group with a high school diploma or GED certificate scored slightly higher than those with some high school education. Not surprisingly, the average scores of native English speaking parents were higher, on average, by nearly two standard deviations than those whose primary language is not English (234 versus 208).

The average pretest score on the CASAS math test was lower than for the reading—219, with a standard deviation of 14.4 (see Appendix D, Exhibit D.6). This score corresponds to an intermediate level of functional skills, indicating that the average Even Start adult's math skills are below the high school level at entry into the program. The pattern observed in reading scores occurs for math scores as well, with higher scores associated with higher education levels. We observed an average score of 189 for adults with less than a 5th-grade education, compared to 218 for those with some high school education. Those with a high school diploma or GED certificate scored about a half standard deviation higher, on average, than those with a 9th- to 12th-grade education (226 versus 218), suggesting that additional education may play a more substantial role in math than in reading skills. This difference is not, however, statistically significant. The difference in math scores between those whose primary language is English (221) and those who are non-native speakers (212) is less striking than the difference in reading scores.

Adults who took the CASAS reading test at both pretest and posttest gained an average of 4.2 scale score points (Exhibit 7.8), equivalent to a gain of .22 standard deviation units. Additionally, adults in the Sample Study gained an average of 5.9 points on the math test from the pretest to the posttest, equivalent to a gain of .44 standard deviation units, approximately six months later. The math gains are nearly half a standard deviation in size, larger than the gain seen for reading. As noted above, initial scores were lower for the math test, allowing more room for change.

Exhibit 7.8: Pretest and Posttest Scores on the CASAS (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

		Pretest		Posttest		Gain	Std.
Test	**N**	**Mean**	**S.D.**	**Mean**	**S.D.**		**Gain**
Reading	137	228	19.3	233	17.4	4.2*	.22
Math	115	221	13.5	227	13.9	5.9*	.44

**statistically significant, $p<.05$*

Exhibit reads:* *137 adults had both pretest and posttest scores on the CASAS reading scale. These adults gained an average of 4.2 points on the CASAS, which translates into a standardized gain of .22 standard deviation units and which is statistically significant at the $p<.05$ level.

When the scaled scores in reading are translated into literacy levels (Exhibit 7.9), we see that the majority of adults (67 percent) were at the high school level at both the pretest and posttest. However, there was some modest movement at the lower levels. For example, 8.8 percent of adults moved from an intermediate level of literacy at the pretest to the high school level at the posttest, and about 5 percent moved from the basic literacy level to the intermediate level.

Exhibit 7.9: Pretest and Posttest Literacy Levels on CASAS Reading (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

	Percent of Adults by Literacy Level (n=117)			
	Posttest			
Reading Level at Pretest	Beginning	Basic	Intermediate	High School
Beginning	4.0%	6.4%	0.6%	0.0%
Basic	0.0%	4.8%	4.8%	1.6%
Intermediate	0.6%	0.0%	1.6%	8.8%
High School	0.0%	0.0%	0.8%	67.2%

Exhibit reads: 8.8 percent of the adults who took the CASAS reading test moved from the "intermediate" literacy level at pretest to the "high school" literacy level at posttest.

The levels of math literacy at pretest and posttest are shown in Exhibit 7.10. Approximately 43 percent of the adults scored at the high school level at both the pretest and posttest. Approximately 19 percent of adults moved from an intermediate level of proficiency at the pretest to the high school level, and about 5 percent moved from a basic to an intermediate level.

Exhibit 7.10: Pretest and Posttest Literacy Levels on CASAS Math (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

	Percent of Adults by Literacy Level (n=105)			
	Posttest			
Math Level at Pretest	Beginning	Basic	Intermediate	High School
Beginning	5.7%	1.9%	0.0%	0.0%
Basic	0.0%	6.7%	4.8%	3.8%
Intermediate	0.6%	0.0%	11.4%	19.0%
High School	0.0%	0.0%	3.8%	42.9%

Exhibit reads: 19 percent of the adults who took the CASAS math test moved from the "intermediate" literacy level at pretest to the "high school" literacy level at posttest 1.

We explored associations and relationships between the CASAS reading and math tests and key predictors, using the same approach as for the HSQ, that is, testing simple correlations first and subsequently building simple and multiple regression models. We examined relationships with such predictors as pretest scores, the amount of adult education hours, family need index, and several project staff characteristics. As was the case for the HSQ, we found that only pretest score remained a significant predictor of gain score for the CASAS reading test; pretest scores account for 20 percent of the variation in gain scores

BEST COPY AVAILABLE

on the reading measure. For the math test, however, the only significant predictor was the proportion of adult education instructors with at least a Bachelor's degree, which explained 14 percent of the variation in gain scores. Interestingly, the pretest score was not a significant predictor for gains on the CASAS math test (see Exhibit 7.7).

The magnitude of the adult literacy gains in the Sample Study is comparable to the magnitude of gains evident in other adult education programs. The gain of 4.2 points on the CASAS reading test is larger than the gain of 3.6 points observed at the first follow-up on the earlier Even Start evaluation. It is nearly four times larger than the 1.2 point gain observed among the control group in the In-Depth Study from the earlier evaluation. When translated into standard deviation units, .24 in reading for the Sample Study is comparable to the .26 observed with the NEIS data from the first evaluation. However, the analytic sample for the first evaluation was restricted to adults with at least seventy hours of instruction, which was not the case for the Sample Study due to the small sample sizes. The standardized gain for the Sample Study also is statistically equivalent to the gains reported in other adult education evaluations using the CASAS. For example, in an evaluation of federally funded adult education programs in California, researchers found average gains of 3.0 scaled score points and a standardized gain of .20 (CASAS, 1992) when adults were tested after eighty to 100 hours of instruction. The fact that we have observed gains for adults in the Sample Study (where there has not been a minimum amount of instruction, as is the case in other studies), and that the gains are comparable to those observed in studies of populations with higher education levels and less stark poverty, suggest that participation in Even Start is having a positive effect on adults' literacy development.

TESTS OF ADULTS BASIC EDUCATION

The Tests of Adult Basic Education (TABE) are norm-referenced assessments designed to measure achievement in reading, mathematics, language, and spelling. The test items are written to reflect language and content appropriate for adults and to measure the understanding and applications of conventions and principles commonly taught in adult basic education curricula (CTB/McGraw-Hill, 1987). The test has been normed on a sample of adults representing participants in adult basic education programs, postsecondary vocational-technical schools, juvenile correctional facilities, and adult correctional institutions. There are four overlapping levels of the test:

- E (Easy) corresponding to grade levels 2.6 through 4.9;
- M (Medium) corresponding to grade levels 4.6 through 6.9;
- D (Difficult) corresponding to grade levels 6.6 through 8.9; and
- A (Advanced) corresponding to grade levels 8.6 through 12.9.

In the Sample Study, projects administered only the reading and mathematics tests of the TABE. The reading test assesses vocabulary (e.g., synonyms, antonyms, words in context, meaning of prefixes and suffixes) and comprehension (e.g., extracting details from text, analyzing characters, identifying main ideas, and interpreting events). The mathematics test measures computation (e.g., addition, subtraction, multiplication, division, fractions, and percents) and concepts and applications (e.g., numeration, problem solving, measurement, and geometry).

There are two parallel forms for each level of the test. There also is a complete battery as well as a shorter survey version of the tests. The complete battery provides scores in each subtest (e.g., vocabulary and comprehension) as well as a total score; the survey form provides only total scores for each test (e.g., reading and mathematics). Both tests are scored on the same scale, with scores ranging from approximately 450 to 865.

The TABE is a timed test. For the complete battery, the reading tests take approximately an hour, and the math tests are allotted about ninety minutes. The reading and math survey forms have about half of the items of the full battery tests and take about thirty minutes each. Prior to taking either the full battery or the survey form, students are given a locator test to determine the appropriate level of the tests to be administered.

In the Sample Study, Even Start staff or staff at collaborating agencies administered the TABE reading and math tests. They had the choice of the full battery or the survey form. The TABE was administered in English. (Although there is a Spanish language version of the TABE, it was not used in this study). Project staff were instructed to administer the sample items on the locator test to determine whether adults had enough ability in reading English to take the test. If an adult was not given the test due to limited English proficiency, this was noted on the ESIS form.

PERFORMANCE ON THE TABE

The results reported for the TABE are also quite similar to what was reported in the 1996 Interim Report, again, because relatively little additional outcome data were submitted for adults for the 1996-97 program year. The average pretest scale score on the TABE reading test was 716.5, with a standard deviation of 81.3 (see Appendix D, Exhibit D.7). This score corresponds to about the end of

5th-grade reading level.[105] As is the case with other measures, pretest means were higher for higher education levels, from 573.5 for parents with less than a 5th-grade education to 718 for parents with some high school. Interestingly, unlike what we observed in the CASAS, the small group with a high school diploma or GED certificate scored slightly lower, on average, than those with some high school education. Parents whose primary language is English had average scores about one-third of a standard deviation higher than those whose primary language is not English (718 versus 693).

The average pretest score on the TABE math test was almost equivalent to the reading—717, with a standard deviation of 86.0 (Appendix D, Exhibit D.8). Math scores, like reading scores, increased with higher education levels; from an average score of 584 for adults with less than a 5th-grade education to 720.5 for parents with some high school education. Again, those with a high school diploma or GED certificate scored slightly below those with a 9th- to 12th-grade education (702 for the diploma/GED group versus 720.5). The small group of adults whose primary language is not English scored slightly lower, on average, than adults whose primary language is English (711.6 versus 717.5).

The sample of adults who took the TABE reading test at both pretest and posttest gained an average of twenty-three scale-score points (Exhibit 7.11). This is a statistically significant difference over the approximately six months between pretest and posttest. These gains are comparable to those on the CASAS, corresponding to a standardized gain of .27 standard deviation units.

As Exhibit 7.11 shows, adults in the Sample Study gained an average of 22.5 points on the TABE math test from the pretest to the posttest approximately six months later, corresponding to a standardized gain of .25 standard deviation units. This gain is more modest than the .44 standard deviation units observed for the adults tested on the CASAS math test.

---

[105] Although we cannot explain why the adults who took the TABE have lower reading levels, on average, than those who took the CASAS, it is clear that there are some systematic differences between the two groups of adults. On average, those who were assessed with the CASAS, for example, have completed more years of schooling, have lower scores on the need index, are more likely to be African-American, and are more likely to speak Spanish as the primary language at home than those who were assessed with the TABE. Each of these comparisons is statistically significant at the .001 level, using t-tests or chi-square tests of association.

Exhibit 7.11: Pretest and Posttest Scores on the TABE (Scaled Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

		Pretest		Posttest 1		Gain	Std.
Test	n	Mean	S.D.	Mean	S.D.		Gain
Reading	277	708	86.7	732	78.3	23.2*	.27
Math	257	708	91.5	731	87.3	22.5*	.25

**statistically significant, $p<.05$*

***Exhibit reads:** 277 adults had both pretest and posttest scores on the TABE reading scale. These adults gained an average of twenty-three points on the TABE, which translates into a standardized gain of .27 standardized deviation units and which is statistically significant at the $p<.05$ level.*

The national norms on the TABE can be used to provide information about how the reading and math scores of Even Start adults compare to those of other students in adult education programs. In particular, TABE scaled scores can be translated into grade equivalent scores, which have been obtained by calibrating the TABE scores to the norming sample for California Achievement Test (CAT) used with children in elementary and secondary grades. Thus, a grade equivalent score on the TABE of 6.8 means that the test taker's performance is equivalent to the typical CAT performance of students who have completed eight months of the 6th grade.

To look at the grade equivalent scores of the Even Start adults, we split the sample at pretest and posttest into quartiles and computed the grade equivalent scores of students at the twenty-fifth, fiftieth, and seventy-fifth percentile. As Exhibit 7.12 shows, the scores of students at the fiftieth percentile (i.e., the median) on the reading test at pretest correspond to a grade equivalent of 6.8; by posttest, students at the median had a 8.1 grade equivalent score.

Similar growth was evidenced for the math test. In general, for the reading and math tests, students at the median gained between one to one-and-a-half grade levels from pretest to posttest, while students at the seventy-fifth percentile gained two or more grade levels over the same six months. Evidence from other studies suggests that adults move, on average, from one grade level equivalent to the next only after approximately 80 to 100 hours of instruction, so the fact that Even Start adults demonstrated such progress suggests that Even Start is having a decided effect.

Exhibit 7.12: Grade Equivalent Scores Corresponding to TABE Reading and Math Quartiles at Pretest and Posttest (1994-95, 1995-96, and 1996-97)[106]

Quartile by Test	Pretest		Posttest 1	
	Scale Score	Grade Equivalent	Scale Score	Grade Equivalent
Reading (n=277)				
25%	673	3.6	702	5.0
50% (median)	736	6.8	752	8.1
75%	770	10.0	785	12.9+
Math (n=257)				
25%	686	4.2	711	5.1
50% (median)	740	6.6	757	7.5
75%	768	8.3	787	10.4

Exhibit reads: The median TABE reading scale score was 736 at pretest and 752 at posttest. This corresponds to grade equivalent scores of 6.8 (at pretest) and 8.1 (at posttest).

We explored associations and relationships between the TABE Reading and Math Tests and key predictors, using the same approach as outlined above for other measures. First we tested simple correlations (see Appendix D, Exhibit D.9) and, where appropriate, we subsequently built simple and multiple regression models. We examined the relationships between such predictors as pretest scores, the amount of adult education hours, family need index, and several project staff characteristics.

A multiple regression that includes both pretest score and one project-level characteristic, the number of adult education instructors, explains 21 percent of the variation in gain scores on the TABE Reading (Exhibit 7.7). No other predictors were significantly related to gain scores, either in simple or multiple regression models.

Posttest scores on the TABE Math test were significantly associated with pretest scores, the number of hours of adult education between the pretest and posttest, and the proportion of adult education instructors with at least a BA degree. These three predictors together account for 18 percent of the variation in posttest scores for adults. This represents the only measure for which the amount of time spent in instruction has a significant effect on the outcome. For the other adult education outcomes, only pretest scores and/or one measure of staff quality (either the proportion of staff with at least a BA or number of adult education instructors) are significant predictors (Exhibit 7.7).

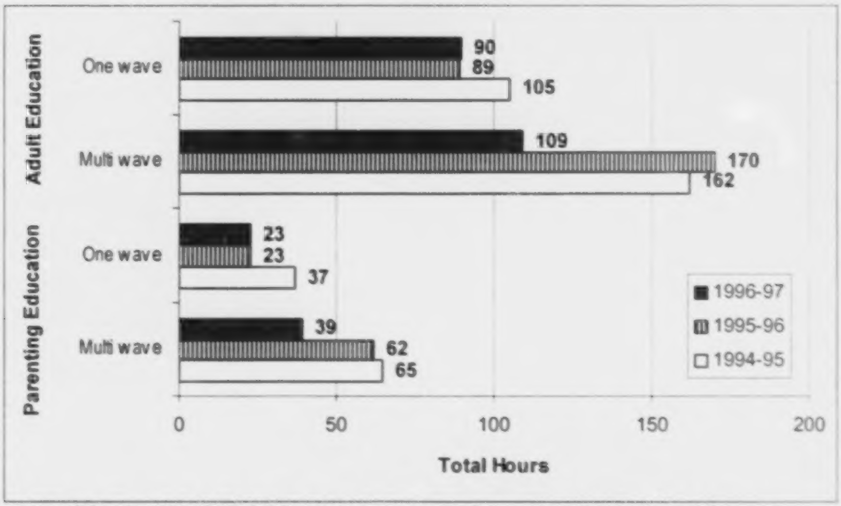
---

[106] While data from studies of other individual adult education projects do not present reliable data on pretest and posttest assessments, we do know that states are beginning to implement performance standards for participants in adult education programs. In Connecticut, for example, the state recently articulated a standard of 75 hours of instruction corresponding to a one grade-level increase.

VARIATION IN PARTICIPATION FOR ADULT SAMPLE STUDY PARTICIPANTS

As described both in Chapter 2 and earlier in this chapter, the families who remain in Even Start long enough to have completed a posttest (or those with multiple waves) are systematically different from those with only one wave. We examined participation rates in the following two ways: one, by comparing the number of hours of participation for one-wave adults to multi-wave adults, and two, by examining differences in participation for adults by primary language. In both cases, there are pronounced differences. As shown in Exhibit 7.13, the average number of hours of instruction per year is consistently higher for adults with multiple waves of tests than the average for those adults with only one wave. We might expect that participants who remain in the program for longer periods of time have more exposure to available instruction, and we also might hypothesize that increased participation over time would be associated with increases in test scores. This differential is consistent with the findings from the analyses of children's test scores reported earlier, where wave status serves as a proxy for time in the program. Were there sufficient multi-wave data on the adults, we might expect to see patterns of growth similar to those evident for Even Start children.

Exhibit 7.13: Average Adult Education and Parenting Hours, by Year, by Wave

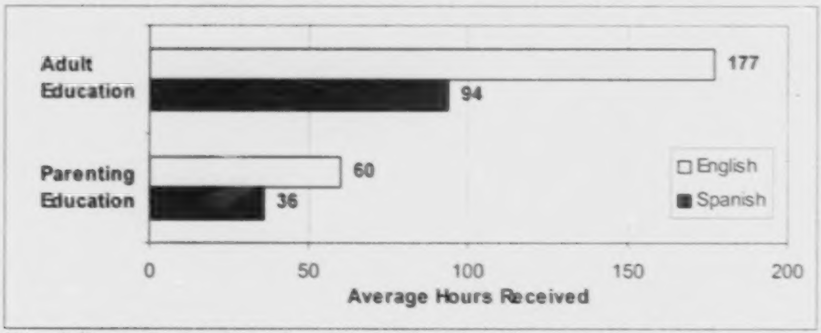


Note: All but the 1996-97 Adult Education comparisons reflect statistically significant differences between adults with one wave and those with multiple waves (p<.002 for 1996-97 parenting education and p<.001 for other comparisons).

Exhibit reads:* *Adults with only one wave of test data participated in an average of 89 hours of adult education over the 1995-96 program year, while those with multiple waves participated in an average of 170 hours of adult education.

The difference in total number of hours of participation by primary language status is also striking, as displayed in Exhibit 7.14. Participants whose native language is English participate for nearly twice as much time, on average, as those whose native language is Spanish. This represents an interesting finding about participation, because the families with two or more waves of data are more likely, on average, to speak languages other than English than those families with only one wave (as described in Chapter 2 and earlier in this chapter), yet the average cumulative exposure to Even Start is lower for non-English-speaking adults. Perhaps for those adults most interested in learning English, Even Start represents only one opportunity to practice English literacy skills, because there are other avenues for learning English. For those non-ESL participants interested in developing reading and math skills, however, Even Start may provide the only opportunities for formal learning of math and reading instruction. The lack of outcome data for non-native English speakers means that we cannot explore comparisons in outcomes. These differentials are certainly worth exploring in other future evaluations of Even Start.

Exhibit 7.14: Average Total Amount of Adult Education and Parenting Education Instructional Service Hours Received, by Primary Language, 1994-95 Through 1996-97



Note: Differences between the number of hours for English and Spanish-speaking adults are statistically significant ($p<.05$)

Exhibit reads: Adults who identify English as their primary language have participated in an average of 177 hours of adult instruction between July 1994 and June 1996, while those who identify Spanish as their primary language participated in an average of 94 hours over the same period.

WHAT WERE THE OUTCOMES ON OTHER PROGRESS INDICATORS?

In addition to tests and interviews, this evaluation collected information about adults' progress in education, employment, and other credentials such as obtaining a driver's license and U.S. citizenship. This information is available for both the Universe Study and the Sample Study. In this section, we present findings on progress made on these indicators, and, where comparable data are available, compare these results to progress reported in the earlier Even Start evaluation. It is important to note that some of these other indicators are not necessarily goals for most adult participants; we report progress on the indicators as one additional snapshot of adult participants.

GED CERTIFICATE

Receiving the GED certificate is a goal for many participants in adult education programs, including Even Start. However, Even Start project staff believe that the GED may be an unreasonable or unattainable goal for many adults with low-level skills. The ESIS includes questions about whether, in fact, Even Start adults describe GED attainment as one of their goals as well as questions about the number of adults who attained the GED certificate. This is somewhat more detailed information than was obtained in the first national Even Start evaluation.

CHANGES IN GED ATTAINMENT

Approximately half of the adults in both the Universe Study and the Sample Study were working toward the GED certificate (Exhibit 7.15). A greater proportion (16 percent) of adults in the Sample Study attained the GED during the 1996-97 program year than did adults in the Universe Study (11 percent).[107] This is based on those adults who did not have a high school diploma or GED at the beginning of the Even Start project year. Interestingly, attainment of the GED was not a goal for approximately one-third of the adults, a proportion that remains stable for those adults who continued to participate in Even Start for more than one program year.

The proportion of adults who attain the GED increases for each subsequent year of continued participation (although only approximately 40 percent of adults continue into a second program year, and 14 percent continue into a third program year). For those who entered in 1994-95, for example, about 8 percent attained a GED during that year; of those who also participated in program year 1995-96, about 11 percent did so, and for those who continued for a third program year, 14 percent attained a GED. When we look across years, the average GED attainment is approximately 8 percent for those who participate in only one year, approximately 13 percent for those who participate in two program years, and 16 percent for those who participate in three program years.

In the first Even Start evaluation, the NEIS reported that 7.1 percent of adults without a high school diploma at intake attained the certificate over one program year. This figure is quite comparable to what we see among the Universe Study participants. In the earlier In-Depth Study (IDS), 14.3 percent of adults in Even Start and 3.6 percent of the control group attained a GED over a nine-month period. The proportion of adults in the Sample Study (for the 1996-97 program year) who attained the GED certificate was less than that of the In-Depth Study and remained somewhat higher than the proportion in the IDS control group.

---

[107] We may have incomplete information on GED attainment in a given year because of the constraints of our reporting period (i.e., July 15th submission deadline for all data on incoming educational status collected only at time of enrollment and changes in educational status (collected annually for participating adults).

When we examine data on GED preparation in other settings, we learn that approximately 30 percent of those who take the GED have been enrolled in a program that focuses on basic skills and that low-literacy learners are more likely to participate in such a program than those learners with stronger literacy skills (Baldwin, Kirsch, Rock, and Yamamoto, 1995).

Exhibit 7.15: Progress Toward GED Certificate Among Adults Without High School Diploma or GED (Universe Study and Sample Study, 1994-95, 1995-96, and 1996-97)

	Percent of Adults					
	Universe Study			Sample Study		
	1994-95	1995-96	1996-97	1994-95	1995-96	1996-97
Progress Toward GED	n=16,226	n=31,481	n=28,596	n=123	n=1,502	n=947
GED is not a current goal	36.3%	37.7%	37.4%	7.3%	30.4%	29.6%
Working toward a GED	50.2%	46.5%	45.2%	58.5%	53.2%	48.3%
Taken part of GED tests but not yet completed	5.2%	6.0%	6.6%	10.3%	6.1%	6.7%
Attained a GED since participating in Even Start	8.2%	9.8%	10.8%	24.4%	10.3%	15.5%

Note: The small number of Sample Study participants for whom we have data from the 1994-95 program year reflects the number of new families enrolled in Even Start during that program year for whom we also have data on GED attainment.

Exhibit reads:* *In 1996-97, obtaining a GED was not a goal for 29.6 percent of parents in the Sample Study.

EMPLOYMENT STATUS

Participants were asked when they enrolled in Even Start and again at the end of the program year whether they were employed either part-time or full-time. This information is available for adults in the Universe Study and the Sample Study. Although employment is not a primary goal of the Even Start program, it is possible that increased education and literacy levels will result in changes in employment status.

CHANGES IN EMPLOYMENT STATUS

About half (49 percent) of adults in the Universe Study, and nearly two-thirds (64 percent) of adults in the Sample Study were not employed either at the beginning or the end of the 1996-97 program year (Exhibit 7.16). For 1996-97, only 10 percent of the adults in the Universe Study, contrasted to 20 percent of those in the Sample Study, were employed at both points in time. This represents a change from the previous two years, when the proportion remained closer to 20 percent. Approximately twice as many of adults in the Universe Study than in the Sample Study (25 percent, contrasted to 12 percent) who had been unemployed at the beginning of the year were employed at the end of the year. This marks a change in the patterns between these two groups, which had shown quite comparable patterns for the two prior years.

In the first evaluation, the results were reported slightly differently, restricting the sample to those adults who were not employed at the start of the year. For that study, nearly 78 percent of adults were not employed at intake; of those, nearly 10 percent found employment by the end of the program year. In the In-Depth Study, 12 percent of the program group and 15 percent of the control group found work by the end of the first program year. When data from the current study are restricted to those adults who were not employed at the start of the program year, we find that 28 percent of adults in the Universe Study and 15 percent of adults in the Sample Study found work by the end of the program year. (These figures differ from those displayed in the table below because in order to compare data from the current evaluation with data from the first evaluation the sample has to be defined differently.)

Exhibit 7.16: Employment Status at Beginning and End of 1994-95, 1995-96, and 1996-97 Even Start Years (Universe Study and Sample Study)

	Percent of Adults								
	Employed at Beginning and End of Year			Not Employed at Beginning and End of Year			Not Employed at Beginning, Employed at End of Year		
Sample	1994-95	1995-96	1996-97	1994-95	1995-96	1996-97	1994-95	1995-96	1996-97
Universe Study	22.0%	20.2%	10.0%	68.5%	61.7%	49.4%	10.5%	13.4%	24.8%
Sample Study	14.6%	19.7%	20.3%	70.2%	64.7%	63.8%	8.6%	12.4%	12.2%

Note: For Universe Study: 1994-95 N =16,419; 1995-96 N =28,632; 1996-97 N =33,102. For Sample Study: 1994-95 n=151; 1995-96 n =1,369; 1996-97 n=1,090.

Exhibit reads: In 1996-97, approximately 64 percent of the adults in the Sample Study were not employed both at the beginning and at the end of the Even Start project year.

OTHER PROGRESS INDICATORS

Even Start program staff at the local, state, and federal levels were interested in the extent to which Even Start participants achieve other credentials that require reading and completing written tests or other criteria. Examples include becoming an American citizen and obtaining a driver's license. Each of these represents a goal that is likely to have more tangible meaning for adults than simply taking a test. For the current evaluation, project staff indicated whether each of these progress indicators was a goal for adults this year and whether they were working on or achieved the goal during the Even Start year. These data are available for both the Universe Study and the Sample Study, but they were not collected during the first Even Start evaluation.

BEST COPY AVAILABLE

CHANGES IN OTHER PROGRESS INDICATORS

For most adults, these progress indicators were not goals during the current year (Exhibit 7.17). In the Sample Study, a greater proportion (10 percent) reported that citizenship was a goal, and that they were working toward it, and of those, about 10 percent became citizens during the 1996-97 program year. Of the 15 percent of adults who reported that obtaining a driver's license was a goal and that they were working toward it, two-thirds (of those adults) obtained their licenses. Approximately 1 percent of adults in the Universe Study obtained U.S. citizenship during the 1996-97 program year, and less than 5 percent obtained a driver's license.

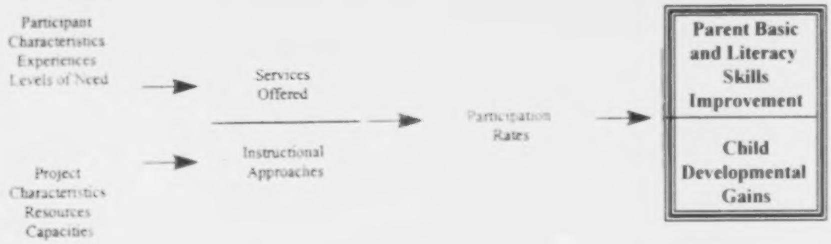
Exhibit 7.17: Other Progress Indicators for Even Start Adults (Universe Study and Sample Study, 1996-97)

Progress Indicators	N	Goal This Year Working Toward	Goal This Year Working Toward and Obtained
Universe Study	**30,179**		
U.S. Citizenship	2,186	6.0%	1.2%
Driver's License	2,792	5.7%	3.5%
Sample Study	**2,288**		
U.S. Citizenship	761	10.2%	1.2%
Driver's License	802	5.9%	9.4%

***Exhibit reads:** In 1996-97, obtaining U.S. citizenship was a goal for 7.2 percent of the adults in the Universe Study. (This figure is comprised of individuals who were working toward citizenship and those who obtained citizenship during the 1996-97 program year, i.e., 6 percent plus 1.2 percent.)*

BEST COPY AVAILABLE

CHAPTER 8: FINDINGS FROM TWO EVALUATIONS



In this chapter, we bring together specific outcome data from the first and second Even Start evaluations in order to elaborate upon what we have learned about the effects of Even Start on children's cognitive development and adult literacy. This chapter incorporates data from both evaluations and presents a detailed summary of findings to date on the effects of Even Start on children's cognitive development and parents' basic skills development.

On the basis of previous research on early childhood educational programs that target at-risk children, we might expect to find evidence of longer-term effects on children's cognitive development and academic/social performance (Barnett, 1992; Campbell and Ramey, 1994; Scheinwart and Weikart, 1997). We might also expect to see evidence of effects or impact in the short term, but some research suggests that short-term effects of such programs are not maintained over time (Casto and Mastropieri, 1986; St.Pierre, 1994). We might expect that the evaluation of Even Start would reveal some impact, at least in the short term, on children's developmental and/or educational measures. Both the first and second national evaluations have indeed found evidence of some short-term effects of participation in the Even Start program.

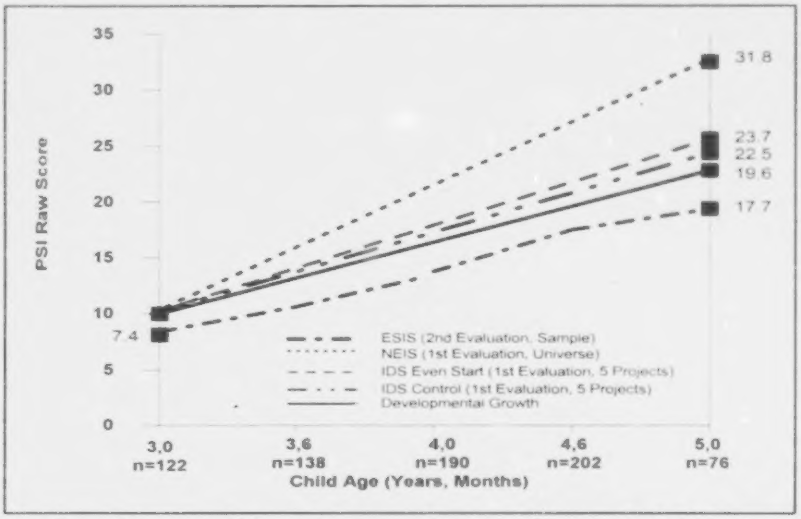
First, we consider evidence based on children's scores on the PSI, using differences between children's scores at various ages. The line labeled "developmental growth" in Exhibit 8.1 shows that children's scores on the PSI increase as they age, by about .40 items per month. This estimate, derived from an analysis of PSI pretest scores collected during the first evaluation, illustrates how we can expect Even Start children to perform on the PSI in the absence of any intervention. The two lines labeled NEIS and ESIS show the observed PSI gains for children in the first and second evaluations, respectively. Note that these two lines both indicate positive changes in observed test scores for children as they develop and grow older. The average changes in scores are greater than one might expect given the .40 items per month boost one would attribute to another month of age. This analysis would lead us to conclude that Even Start has an important impact on children's PSI scores.

But other data also are available. The two lines on Exhibit 8.1 labeled IDS Even Start and IDS Control show the gain scores for children in the five sites that

BEST COPY AVAILABLE

participated in an experimental In-Depth Study during the first evaluation. The changes in scores for children in these groups fall between expected developmental growth and the NEIS "universe" group. This is not unexpected; the five sites selected for the In-Depth Study cannot be expected to mirror the universe of Even Start projects exactly.

Exhibit 8.1: PSI Growth for Different Even Start Evaluation Samples, Compared with Developmental Growth



Note: The numbers presented below each age range marker (e.g., 3.0, which includes children between the ages of 3 years, 0 months and 3 years, 5 months) indicate the number of children in the Sample Study for whom we have valid test scores on the PSI

Exhibit reads:* *The test scores of In-Depth Study program children who took the PSI increased as they grew older, ranging from an average score of 10 at 3 years of age to an average score of approximately 20 at 4 years, 6 months.

On the other hand, the difference in gain scores between the randomly assigned Even Start and control group children is not statistically significant, indicating that we see no special effect of being in Even Start. Additional analyses, presented in the first evaluation report, show that the straight line differentials presented in Exhibit 8.1 are a bit misleading. In particular, Even Start children in the IDS sites outscored control group children during their first year in the program, when control group children typically were not in any organized preschool program. However, control group children's PSI scores caught up once they entered preschool or the public school system.

The true growth rate data described in Chapter 7 both corroborate and challenge findings obtained during the first evaluation, that is, that children do indeed grow while in Even Start, and that their growth goes beyond what one might expect given maturation alone. But there are some important points that emerge from the analyses reported earlier. One is that examining a cross-sectional sample of Even Start children to hypothesize about growth may provide incomplete information. On the basis of the longitudinal analyses of the multiple-wave children, it is clear that the pretest scores for children with only

BEST COPY AVAILABLE

one wave are systematically different from those with two or more waves. Further, it is also clear that the growth rates vary across critical predictors, and this has potential implications for thinking about program design and service delivery. Children who enroll in Even Start at earlier ages grow at a different rate—and at a more accelerated rate—than one might predict on the basis of age alone. The evidence from both the PSI and the PLS suggests that children who remain in Even Start for longer periods of time may experience growth in outcome measures that begin to tap into the domain of cognitive achievement.

What remains to be seen is whether the growth observed would be sustained, and that question can only be addressed through a study that follows children well into their elementary school years. When we conducted a follow-up study of children from the In-Depth Study of the first national evaluation, we found no real differences between Even Start and comparison children (Gamse, Conger, Elson, and McCarthy, 1997), although the study examined children two and three years later. The evidence from a few long-term follow-up studies consistently finds meaningful differences after a greater amount of time between program participation and subsequent post-program data collection. In fact, other impact studies of early childhood education programs typically do not find evidence of meaningful differences until several years after program participation (Schweinhart and Weikart, 1997).

The same pattern is seen in an analysis of data from the Peabody Picture Vocabulary Test (PPVT), a measure used only in the first evaluation. Exhibit 8.2 shows that the universe of children in the first evaluation gained at a faster rate than children in the IDS study. Children in the IDS Even Start group gained more than IDS control group children from pretest to the first posttest. However, control group children caught up by the time the second posttest was administered.

Exhibit 8.2: PPVT Growth for Different Even Start Evaluation Samples

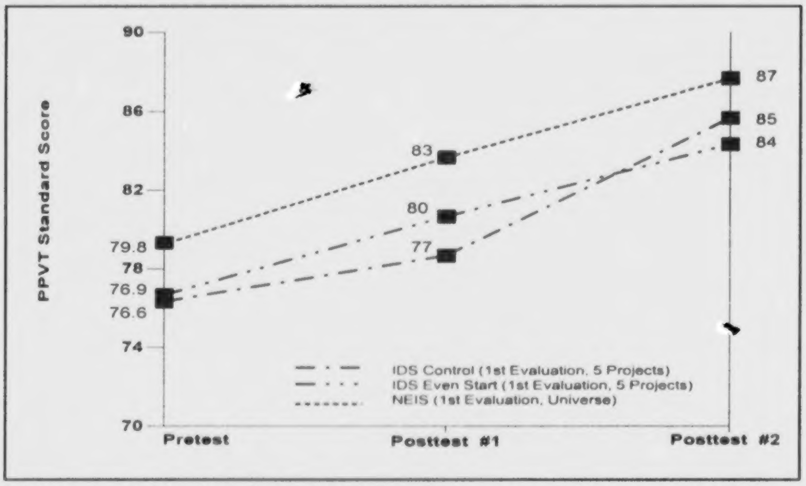


Exhibit reads: Children in the In-Depth Study Even Start sample scored higher on the PPVT than children in the control group at the first posttest; children in the control group caught up by the second posttest.

Analysis of data collected on the PLS-3 in the second national Even Start evaluation shows growth from pretest to posttest (over a single program year as well as when examining rates of growth over a longer time period, as described earlier). This growth suggests that the gap between Even Start children and children in the PLS norms group begins to narrow over time (Exhibit 8.3, see also Exhibit D.2a, Appendix D). Again, because the norming population's scores are scaled such that an average child would score 100 at any age of administration, one would not anticipate observing growth (within the norming population). The fact that the distance between Even Start children's scores and the flat scaled score appears to decrease over time suggests that participation in Even Start is having an effect on children's educational outcomes.

It appears from all of these measures that children get a "boost" in cognitive development when they first are exposed to an organized school setting (preschool or the public schools). Enrollment in Even Start ensures that such an exposure occurs at an earlier age, so Even Start children get an earlier boost than control group children. The question to be answered by future research is whether that early boost translates into other types of benefits for Even Start children.

Exhibit 8.3: PLS-3 Growth for the ESIS Evaluation Sample

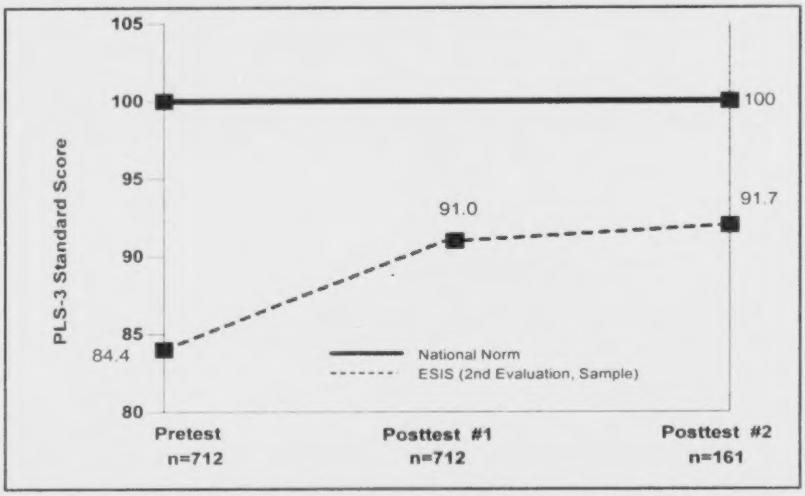


Exhibit reads: Children in Even Start scored closer to the national norm on the PLS-3 at posttest #1 than at pretest. While there is no control group, it is clear that Even Start children's test scores moved closer, on average, to the scores of the norming population.

ADULT EDUCATION DEVELOPMENT

We now review specific findings regarding adult basic skills development from the two evaluations. According to the CASAS developers, a score of 225 on the CASAS reading test signifies high school level performance. Exhibit 8.4 shows that all of the Even Start evaluation groups performed at or above this level. The exhibit also shows that adults in both the first and second Even Start evaluations (NEIS and ESIS) made pretest-posttest #1 gains on the CASAS reading test. Those gains were as large or larger than the gains observed in other pretest-posttest design studies of adult education programs.

Was Even Start responsible for the gains? One way of judging this is to examine the CASAS reading scores of adults who participated in the random assignment In-Depth Study that was conducted in five projects as part of the first Even Start evaluation. The Even Start IDS group did not gain much from pretest to first posttest (one school year) but made a more substantial gain from the first posttest to the second posttest (the second school year). While the IDS control group started out a few points lower at pretest, their growth rate exactly paralleled the Even Start group. This occurred, in part, because adults in the IDS control group also availed themselves of local adult education programs, leading to the conclusion that while Even Start adults do make gains on the CASAS reading test, we cannot necessarily attribute those gains to Even Start.

Exhibit 8.4: CASAS Reading Growth for Different Even Start Samples

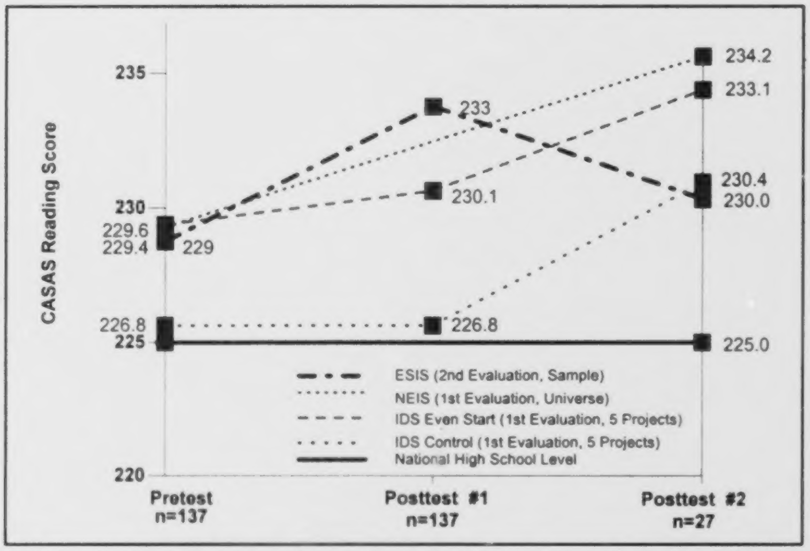


Exhibit reads: Even Start adults achieved gains on the CASAS reading test, but so did adults in a control group (as part of the first evaluation).

Even Start adults also showed a pattern of growth on the CASAS math test, which was used only in the second evaluation. Exhibit 8.5 shows that Even Start adults who entered the program scored almost half a standard deviation below the high school level. After one program year, their scores had increased so that they were able to perform high school level work. While it is an impressive gain, we do not have a control group against which to gauge the progress of Even Start adults. Hence, we cannot unambiguously attribute this growth to Even Start.

Exhibit 8.5: CASAS Math Growth for the ESIS Evaluation Sample

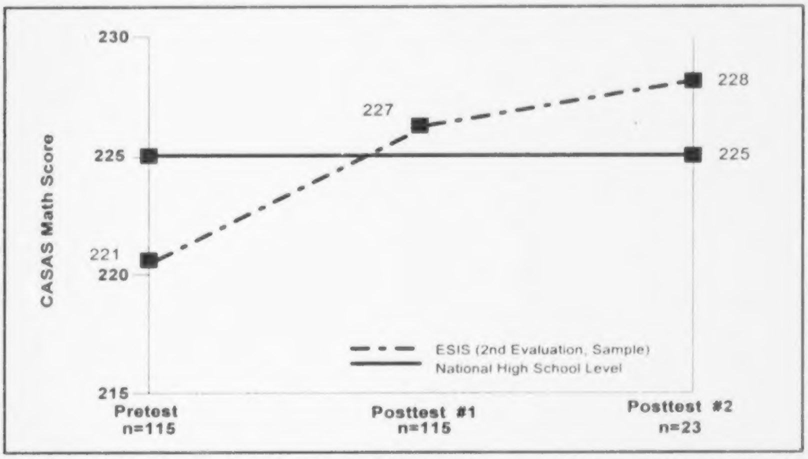


Exhibit reads: Even Start adults who took the CASAS math test scored below the high school level at pretest, but their scores increased to the high school level at posttest. No control group data are available for this analysis.

Exhibit 8.6 presents growth data for Even Start adults on the TABE reading and math tests. Both of these measures were used only in the second evaluation. While adults showed clear gains between the pretest and first posttest of about 3 standard deviation units on each test, we have no control group and are unsure of the extent to which Even Start was responsible for these gains. Further, for the small number of adults with a second posttest, there was a decline in scores on the math test. Interestingly, for those few adults with a second posttest, the reading scores were consistently lower, on average, than the reading scores for adults with only waves one and two, while the math scores were close to the mean scores.

Based on these data we are faced with uncertainty about Even Start's effects on adult literacy. Clearly, adults who participate in Even Start make gains on all of the measures that have been used. Gains in math appear to be larger than gains in reading at posttest #1. However, where data are available on adults not in Even Start, they too make gains, possibly because they too take part in adult education programs.

Exhibit 8.6: TABE Reading and Math Growth for the ESIS Evaluation Samples

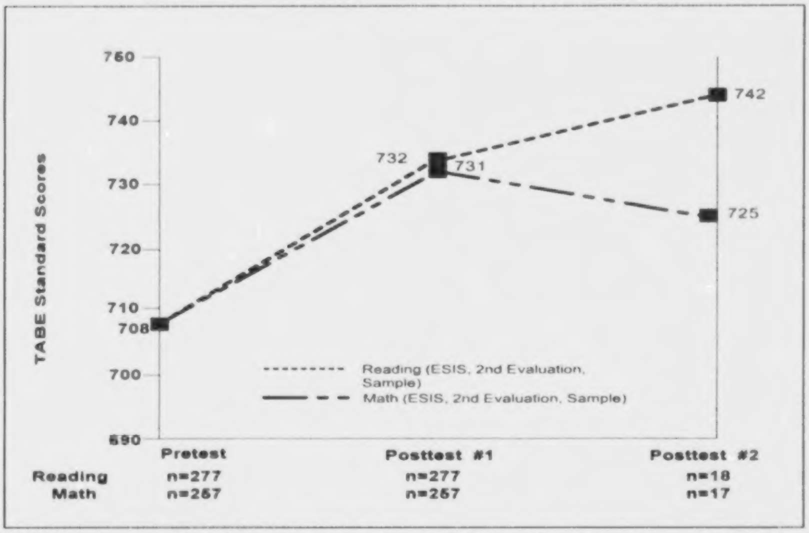


Exhibit reads: Even Start adults achieved gains on the TABE reading and math tests. No control group data are available for this analysis.

A final piece of information about adult literacy is presented in Exhibit 8.7, which shows the rate at which adults attained a GED while in Even Start. The two "universe" data collections (from the first and second evaluations) showed that 8 percent and 11 percent of Even Start adults attained a GED over a program year. We also examined the pattern of GED attainment for adults who participated for more than one program year. The proportion increased for each subsequent year of continued participation (although only approximately 40 percent of adults continued into a second program year, and 14 percent continued into a third program year). For those who entered in 1994-95, for example, about 8 percent attained a GED, for those who continued in program year 1995-96, about 11 percent did so, and for those who continued for a third program year, 14 percent attained a GED. The data for those who entered in 1995-96 suggest a similar pattern; approximately 7 percent attained a GED in that year, and 13 percent (of the 35 percent of adults who continued into the 1996-97 program year) attained a GED in 1996-97. The random assignment In-Depth Study from the first evaluation shows that adults in Even Start were far more likely to attain a GED than control group adults (22 percent versus 6 percent).

It seems clear that Even Start does help adults get a GED. The next question is "How helpful is a GED?" There is little evidence that a GED can be equated with any particular level of literacy performance or gains (e.g., the New Chance evaluation conducted by Quint et al., 1994). Recent research by Murnane, Willett, and Boudett (1995) shows that attainment of a GED is better in an economic sense than not having a GED but is not as beneficial as having a high school diploma.

The GED credential is an important focus of many Even Start projects and a goal that seems achievable for many Even Start adults within a reasonable amount of time. As mentioned earlier, approximately half of Even Start adults indicate that attaining a GED is indeed a goal (refer to Exhibit 7.15), based upon the number who are working toward GED attainment, who have taken some portion of the tests, or who have attained it during a particular program year. Recent research on adults' literacy skills found comparable literacy levels when contrasting GED examinees to National Adult Literacy Survey (NALS) respondents. This raises some potential questions about the value of a GED versus more traditional high school completion, because GED attainment is not necessarily perceived as equally credible as a traditional high school diploma by prospective employers (Baldwin et al., 1995). At the same time, there also is recent research that documents the value of the GED as a credential in terms of future employment earnings (Murnane, Willett, and Boudett, 1995). However, there is some research that suggests that GED attainment is unlikely in the short term for first-level adult learners who enter adult education programs with less than a 5th-grade education or equivalent (Stites, Wagner, Foley, and St.Pierre, 1996).

Exhibit 8.7: Rate of GED Attainment for Different Even Start Evaluation Samples

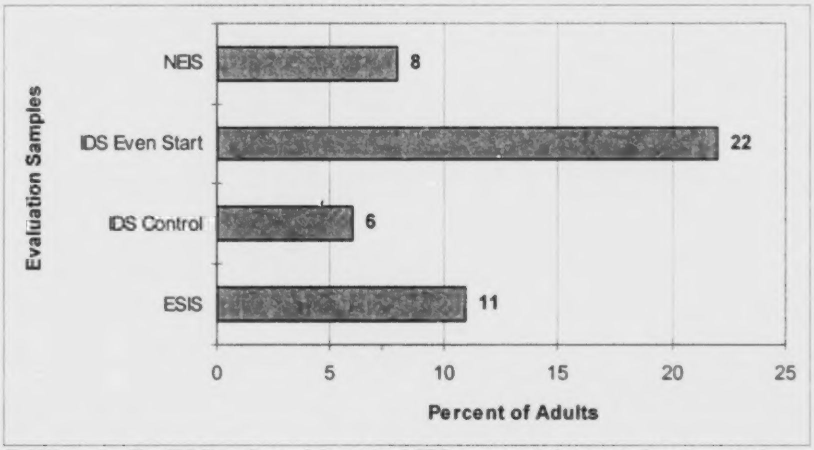


***Exhibit reads:** The IDS Even Start adults attained GEDs at a much faster rate than the control group adults.*

This presents a challenge to many of the Even Start projects because approximately half of adult enrollees enter Even Start having completed less than a 10th-grade education, 20 percent having completed up to the 8th-grade, and 6 percent having completed less than a 6th-grade education. While this debate about the value of a GED will undoubtedly continue, we also know that many Even Start participants enroll for several reasons, including furthering their education (and attaining a GED). Even Start projects provide an array of literacy education services, in addition to GED preparation, to help participating families improve their literacy skills.

BEST COPY AVAIL

CHAPTER 9: CONCLUSIONS

Over the past eight years there have been significant changes in the political and social contexts within which Even Start operates. Family literacy was a relatively novel concept in the late 1980s, and the notion of structuring educational services for families was unfamiliar. Coordination of educational services between provider agencies was more likely to be occasional than purposeful. The attention to literacy, both for children and adults, has increased substantially over the past decade, through such national efforts as *Goals 2000*, which articulated school readiness and literacy goals for children and their families, the recently passed Reading Excellence Act, which focuses on improving literacy skills in children, as well as the research syntheses on reading commissioned by the National Research Council. The importance of early learning as well as lifelong learning is also highlighted in the U.S. Department of Education Strategic Plan.

Further, recent research in cognitive and language development has emphasized the importance of early learning for children (Shore, 1997). Now, in the late 1990s, there is a family literacy community of practice, spurred by the Even Start program as well as the efforts of national advocacy groups (including, for example, the National Center for Family Literacy). There is also increasing attention to the field of family literacy from the educational research community.

How have these contextual changes affected the Even Start program during its second four years? What have we learned from the two national evaluations of Even Start over the past eight years? In the beginning of this report, we outlined the four main research questions that have guided this national evaluation:

- Who is served and what services are received? Is the program serving those for whom it is intended?
- How are federal resources used to implement Even Start services?
- How well does the basic Even Start model work—and what happens to participants as a result of their participation in the program?
- What are the elements that distinguish effective practices and programs?

The evaluation focuses both on general programmatic questions that address the extent to which the federal Even Start program has achieved its goals, as well as on the extent to which the effectiveness and impact of the program is associated with specific project or individual characteristics. First, let's review what we have learned about the Even Start program.

LESSONS LEARNED ABOUT THE EVEN START PROGRAM

It is clear that the Even Start program has indeed begun to achieve some of its overarching goals. Even Start has been able to provide unified family literacy experiences for children and their families through an integrated program of early childhood education for children, parenting education, and adult literacy and adult basic education for adults. Participation in Even Start has led to improvements in children's school readiness and language development and in adults' literacy skills, as assessed by various outcome measures across two four-year evaluations. During the first national evaluation of Even Start, the administration of the program also moved from the federal to the state level as the number of funded projects increased substantially. Further, as time went on, and the administration of projects shifted to state control, the federal share of the projects' total operating costs was designed to decrease annually while the non-federal share increased.

We also learned about the early impact of the Even Start program. The first national evaluation indicated that children participating in Even Start made greater gains on some measures than children in a comparison group, and that Even Start adults were more likely to complete the requirements for attaining a General Educational Development certificate (GED) than were adults in a comparison group. We learned that participants progressed on some of the educational and developmental measures used, but that the progress of Even Start participants was not consistently better than the progress of individuals in a comparison group.

Some of the findings from the first few years of the program and its evaluation led to changes in the legislation re-authorizing the program, including strengthening the targeting of families most-in-need in their respective communities; providing **intensive** instructional services in all three core areas; offering services on a year-round calendar; providing services to children in at least a three-year age range; allowing projects to serve teen parents within the mandatory school age (i.e., those not previously eligible for adult education); and continuing to demonstrate coordination, not duplication, of available services. At the federal level, the guidelines governing the Even Start program continued to change, reflecting the increasing awareness of the need to specify some elements of service provision while retaining the flexibility of locally-determined service delivery, and while ensuring that the Even Start program continued to serve those most in need. Some aspects of the Even Start program design have purposefully remained unspecified, such as establishing minimum amounts or duration of instruction to be offered, or identifying and/or recommending particular curricular or pedagogical approaches to instruction.

Many of the programmatic trends observed earlier have persisted. At the national level, the growth of the program has continued; the number of projects has increased from 439 in 1993-94 to 637 in program year 1996-97. This reflects the continued support for the Even Start program at the federal level. Although the amount of instruction offered and received in core instructional areas has increased over the average levels of the first four years, the changes in the second four years appear to be leveling off. The qualifications and experience levels of Even Start staff have remained stable. The patterns of service delivery, whether provided by Even Start paid staff or staff from collaborating agencies, appear to have stabilized.

There have been changes to the populations being served by the program as the numbers of projects and participants have increased. The Even Start program is now serving more teen parents, greater proportions of Hispanic/Latino families, and more families with greater evidence of disadvantage (as reflected in the composite need index described earlier in this report). The increase in the Hispanic population in Even Start comes at a time when other federal programs (e.g., Head Start) have been much slower to experience increases in the participation rates of Hispanic populations (Administration for Children, Youth and Families, 1992, 1997). At the national level, Even Start has clearly widened its reach to include more diverse populations, including greater numbers of those families most in need.

Some of the changes in the demographic characteristics of participants have consequences for the nature of services offered and received. Teenage parent participants, whose children are younger, on average, than the children of other participants, may have different needs both for early childhood education services and for adult education services. Non-native English speakers may have different needs for adult literacy education—in their own languages as well as in English—than native English speakers.

Changes in state-level requirements for recipients of public assistance are beginning to translate into changes in demand for employment-related or vocational education, and may also lead to changes in parents' availability to participate in Even Start services. Along with changes in the composition of the participant population, the patterns of participation have changed as well. Families with teen parents do not remain enrolled in the program as long as older parents, on average; those with higher (or needier) average scores on the need index participate intensively for limited amounts of time. Families whose primary language is not English are more likely to remain active participants for longer periods of time.

These patterns clearly reflect the variations in program participation by different participant groups. They also highlight the recurring tension between providing services to families most in need while sustaining their active involvement. Additionally, these differential participation rates raise some provocative questions about how to design program services to serve the majority of families who participate only for a limited time. To what extent are local projects designed to provide modules of instruction, for example, that are sufficiently intensive and flexible in timing to serve families who participate for three or four months?

Participants in Even Start did make progress on the outcome measures used in the second evaluation. The availability of longitudinal data, which allowed us to investigate children's growth over time, has been one positive feature of an evaluation design fraught with limitations. The fact that we have been able to observe growth over time *within* individual children on both the PSI and the PLS-3 suggests that participation in a program like Even Start might help spur accelerated learning, as measured by these outcomes. Further, our analyses indicate that children progress at the same rate regardless of family need, although children from families with greater needs consistently score lower, on average, than children from families with fewer needs. It is also clear that the longer children participate in Even Start (and the younger they are upon entry) the greater the gain, or the steeper the growth rate. By contrast, the performance of children who enter Even Start at a later age suggests that the older the child upon entry, the lower the score, on average.

One of the paradoxes we face, however, is that while we have indeed observed changes in outcome measures—particularly for children—the current evaluation design does not allow us to attribute progress to participation in Even Start. When we consider the findings from the first national evaluation in tandem with the current findings from the second evaluation, the value of a strong research design (as existed in the In-Depth Study) becomes even more critical. The first evaluation's In-Depth Study, which examined progress throughout the duration of the study for a much smaller number of participants, offered significantly greater explanatory power about the gains that could reasonably be attributed to the Even Start program because of the random assignment design (i.e., In-Depth Study participants were randomly assigned either to the Even Start program or to a control group).

LESSONS LEARNED ABOUT EVALUATION OF THE EVEN START PROGRAM

A number of valuable insights about evaluation design have emerged as a result of the long-term study of the Even Start program. One consequence of the flexibility of program design has been that local projects can tailor service delivery on the basis of locally available resources to meet the needs of individuals within their own communities. However, the same flexibility has consequences for the national evaluation, because the design, content, organization, and staffing of services all vary across local projects. Not only is there variation across local projects, but staffing and service delivery patterns may change *within* projects from year to year. These changes, coupled with the indicators of greater variability in demographic characteristics, mean that an evaluation must be able to assess progress for participants who speak different primary languages, who participate for differential amounts of time, and whose children may be too young to participate in the assessment measures used in the current evaluation.

Further, variation across these dimensions affects the capacity of the national evaluation to identify effective programs and practices. As described above, the definition of appropriate services has evolved over the past several years (vis-à-vis the legislation). It has become increasingly clear, for example, that the definition of appropriate services requires projects to serve both as a provider of educational services and as the "glue" that meaningfully connects and supports families' educational experiences. Some elements of the comprehensive management information system (or ESIS) data collected as part of the national evaluation changed to reflect refinements and emphases defined by the changes in the relevant legislative language. Even though the ESIS data have changed somewhat over the course of the second national evaluation, the data collected are not yet specific enough to assess accurately the content of services provided. Nor is the ESIS, even after modifications, fine-grained enough to be able to identify effective practices and program elements, or to be able to document how Even Start functions both as a provider of educational services and as the "glue."

INSIGHTS INTO EVALUATION OF THE IMPACT OF THE EVEN START PROGRAM

At one level, the modifications to the Even Start program, and the corresponding refinements in the ESIS data collection forms, illustrate the value of maintaining clear connections between the program under review and the methods employed for that review. Yet the outcome or impact portion of the evaluation did not change over the course of the program's second four years. There are several key issues that have surfaced: identifying appropriate educational or other progress indicators; ensuring consistency and quality of data collection; test administration; use of comparison groups; and matching data collection to actual participation patterns. Each of these is discussed below.

IDENTIFYING APPROPRIATE OUTCOMES

Not surprisingly, some of the changes in the participant population have had consequences for the second national evaluation. When decisions were made over five years ago about the appropriate educational and developmental measures to include in the current evaluation, for example, the proportion of Hispanic participants was considerably lower than it is now, in 1998. Because the Even Start program is designed to improve parents' literacy in English, the evaluation focused upon assessments of adults' progress in English. Over the past several years, however, the steady increase in the numbers of Hispanic participants has translated into an increasing number of adults for whom there has not been any assessment of progress in any language. Additionally, there is growing consensus in the field of second language acquisition that facility in a second language requires some minimal proficiency in a first language (August and Hakuta, 1997). While measures of functional literacy (like the CASAS) can assess progress for some low-literate adults, the progress of families with very limited educational experience has not been adequately assessed.

Given what we know about patterns of participation, what are the appropriate outcomes? Progress measured on standardized assessments such as the TABE may be inappropriate for adults who enter the program having completed fewer than six years of formal schooling, or for whom attaining a GED represents a multi-year process.

ENSURING CONSISTENCY AND QUALITY OF DATA COLLECTION

In retrospect, the strategies used to collect outcome data were not as effective as planned. The Sample Study staff were trained in test administration and scoring only once. It is now clear that personnel changes at the project level resulted in inconsistently trained Sample Study staff, and consequently, in inconsistent data quality. Additionally, there was an assumption that all Even Start projects would attend annual program and evaluation conferences that would include sessions devoted specifically to evaluation. In the first national evaluation, such annual evaluation-focused conferences provided feedback to all projects about the data they were submitting as part of the national evaluation, and also provided introductory or refresher training in test administration and data entry to program staff as necessary. There have been at least two consequences of the absence of such conferences: one, Sample Study project staff have not consistently been trained either about test administration or data entry, and two, neither Sample Study nor other projects have participated in program-wide conversations about the use of evaluation data. Both of these consequences have obvious implications for evaluation. In order for the national evaluation to examine the Even Start program, the relationship between data quality and any credible findings must be clearly understood at all levels—from the state to the local project staff responsible for recording and submitting project- and participant-level data. The evaluation began to provide local projects with summary data from their own projects and their own states (as well as national level data) in order to make such comparisons useful at the local level.

TEST ADMINISTRATION

The selection of instruments reflected a concern that tests be relatively easy to administer and score for people with varied experience in testing. The Sample Study relied upon local project staff to administer tests and to record test scores. Although all Sample Study projects sent staff to training in the fall of 1994, Sample Study staff ranged from inexperienced to expert in their experience and comfort with test administration. Since then, there has been turnover at the project level, and the recorded scores from test administrations have reflected lack of experience in scoring tests correctly. It is clear that if project staff are responsible for administering and scoring tests, the instruments should be easy to use, the use of the *local* testing data *at the national level* should be understood, and that project staff should be required to attend regular training in the event of local project personnel changes.

USE OF COMPARISON GROUPS

The Sample Study did not use a program-comparison group design, and as a result, changes in test scores for Even Start participants cannot be compared to non-participants. For some measures, we have been able to fall back upon findings from the In-Depth Study component of the first national evaluation, but because the measures have changed, such reference points have not consistently been available. The Sample Study design would have been much stronger had there been a comparison group against which to assess progress of Even Start participants.

MATCHING THE DATA COLLECTION SCHEDULE TO ACTUAL PARTICIPATION PATTERNS

The Sample Study measurement design assumed that data could be collected over two program years, or for three waves of data collection: the first wave at intake, the second wave sometime later during the same program year (assuming entry in the fall months), and a third wave sometime during the second year of participation. The decision to collect data using this schedule reflected, among other factors, the experience of the first national evaluation, when evaluation contractor staff themselves located and visited the participating families in the In-Depth Study to administer assessments (even when families were no longer active Even Start participants). In the Sample Study, however, most families remained actively involved in Even Start for far less than two program years, and only approximately 10 percent of the Sample Study participants were available for a third wave. Tying data collection to the actual patterns of participation is critical.

FUTURE EVALUATION QUESTIONS

As a federal funding strategy, Even Start has certainly spawned a new type of program, a program that is clearly providing services not generally available elsewhere—through Head Start, or regular adult literacy or adult education venues. This strategy has a defined life cycle for federal support: four years, with one possible second four-year funding cycle, for a total of eight years. Over the next two to three years, as a substantial number of projects hit the eight-year maximum, what will happen to well-established projects? Will the nature of services provided by those projects who are able to continue on their own vary systematically from services provided by projects that operate with some federal funding? Is it important or even critical for projects to be able to claim that they have even a modest amount of federal funding in order to operate effectively (e.g., to ensure coordination with other federal programs such as Title I, or that families are required to participate in all three core instructional components)? This will represent an interesting question for the next round of evaluation to consider. Further, as the shift from federal to local (including state) support continues, the role of the states in administering Even Start will become more visible. What will the state role be? How might the next national evaluation try to account for the diversity in how states offer programmatic guidance and how they approach these funding decisions?

FUTURE DIRECTIONS

We began this discussion by summarizing the major research questions this national evaluation sought to address. The evaluation has been better able to address the first two general research questions (one about who Even Start serves and the services provided, and two, about the resources used to support the program) than it has been able to address the latter two questions (about the impact on participants and the elements of effective programs and practices). We hope that the lessons learned from this evaluation prove useful for the next round of Even Start programs and for the next round of the national evaluation.

It is already clear that the third national evaluation of Even Start is taking steps to address some of the issues raised here. The Even Start Performance Information Reporting System (ESPIRS), the revised evaluation data management system, reflects continued refinements and modifications made as a result of what we have learned from previous evaluation studies. The plan to use national evaluation contractor staff to collect systematic data from a subset of projects in an Experimental Study will alleviate issues of data quality, and the expansion of progress indicators included both in the Experimental Study and the ESPIRS will hopefully allow for a better fit between exposure to Even Start and assessment of progress.

The complexity of the program is better understood now than several years ago, as a result of increased conversations among federal, state, and local officials about the program, on one hand, and federal efforts to examine how Even Start operates through a variety of methodological approaches, on the other hand. The increasing knowledge about the program allows ongoing research efforts to focus more sharply than before on issues of impact and on providing more feedback to the local projects and state coordinators. The convergence of information from multiple studies at various program levels holds promise for a greater understanding of the Even Start program effects and thus enhancing program outcomes.

REFERENCES

Abt Associates Inc.

(June 1991) *Preschool Inventory administration manual.* Cambridge, MA: Abt Associates Inc.

Abt Associates Inc.

(1997) *Head Start Family and Child Experiences Study: Draft interim report on spring 1997 parent and staff interview data.* Prepared for U.S. Department of Health and Human Services, Administration for Children, Youth and Families.

Administration for Children, Youth and Families

(January 1992) *Project Head Start statistical fact sheet for fiscal year 1991 (for program year 1990-91).* Administration for Children, Youth, and Families/U. S. Department of Health and Human Services. Washington, DC: Author.

Administration for Children, Youth and Families

(January 1997) *Project Head Start statistical fact sheet for fiscal year 1996 (for program year 1995-96).* Administration for Children, Youth, and Families/U.S. Department of Health and Human Services. Washington, DC: Author.

August, D., and Hakuta, K. (Eds.)

(1997) *Improving schooling for language minority children: A research agenda.* Washington, DC: National Academy Press.

Bache, W.

(1980) "A psychometric analysis of the National Day Care Study: Phase III child test battery." *Technical appendices to the National Day Care Study: Measurement and methods. Volume IV-B.* Cambridge, MA: Abt Associates Inc.

Baldwin, J., Kirsch, I. S., Rock, D., and Yamamoto, K.

(1995) *Literacy proficiencies of GED examinees: Results from the GED-NALS comparison.* Washington, DC: American Council on Education/Educational Testing Service.

Boesel, D., Alsalam, N., and Smith, T. M.

(1998) *Research synthesis: Educational and labor market performance of GED recipients.* Washington DC: National Library of Education, Office of Educational Research and Improvement, and U.S. Department of Education.

Bryk, A. S., and Raudenbush, S. W.

(1992) *Hierarchical linear models: Applications and data analysis methods.* Newbury Park, CA: Sage.

Caldwell, B. M., and Bradley, R. H.

(1984) *Home observation for measurement of the environment.* Little Rock, AR: University of Arkansas.

Campbell, F. A., and Ramey, C. T.

(1994) "Effects of early intervention on intellectual and academic achievement: A follow-up study of children from low-income families." *Child Development.* 65(2), 684-698.

CASAS

(December 1990) *GAIN Appraisal Program: Fourth report.* San Diego, CA: CASAS.

CASAS

(July 1991) *CASAS statewide accountability system for federally funded 321 adult basic education programs.* San Diego, CA: CASAS.

CASAS

(1992) *Student progress and goal attainment in California's federally funded ABE programs.* San Diego, CA: CASAS.

Casto, G., and Mastropieri, M. O.

(1986) "The efficacy of early intervention programs: A meta-analysis." *Exceptional Children.* 52(5), 417-24.

Cohen, J.

(1988) *Statistical power analysis for the behavioral sciences.* 2nd ed. Hillsdale, NJ: Erlbaum.

Cohen J., and Cohen, P.

(1983) *Applied multiple regressions/correlation analysis for the behavioral sciences.* 2nd edition. Hillsdale, NJ: Erlbaum.

Coons, C. E., Gay, E. C., Fandal, A. W., Ker, C., and Frankenburg, W. K.

(1981) *The Home Screening Questionnaire reference manual.* Denver, CO: John F. Kennedy Child Development Center, School of Medicine, University of Colorado Health Sciences Center.

CTB/McGraw-Hill

(1970) *Preschool Inventory, Revised Edition 1970: Handbook.* Monterey, CA: CTB/McGraw-Hill.

CTB/McGraw-Hill

(1987) *Tests of Adult Basic Education: Examiner's manual.* Monterey, CA: CTB/McGraw-Hill.

Development Associates

(March 1992) *National evaluation of adult education programs. First interim report: Profiles of service providers.* Arlington, VA: Development Associates.

Diggle, P. J., Liang, K. Y., and Zeger, S. L.

(1994) *Analysis of longitudinal data.* Oxford: Oxford University Press.

Frankenburg, W. K., and Coons, C. E.

(1986) "Home Screening Questionnaire: Its validity in assessing home environment." *The Journal of Pediatrics.* 108(4), 624-626.

Gamse, B., Conger, D., Elson, D., and McCarthy, M.

(1997) *Follow-up Study of families in the In-Depth Study: Final report.* Cambridge, MA: Abt Associates Inc.

Goldstein, H.

(1995) *Multilevel statistical models.* 2nd edition. New York, NY: Halstead Press.

Gruber, J., and Madrian, B. C.

(1997) "Employment separation and health insurance coverage." *Journal of Public Economics.* 66, 349-382.

Hedeker, D., and Gibbons, R. D.

(1996) "MIXREG: A computer program for mixed-effects regression analysis with autocorrelated errors." *Computer Methods and Programs in Biomedicine.* 49, 229-252.

High/Scope Educational Research Foundation

(1973) *The National Home Start Evaluation. Interim report III: Summative evaluation results.* Ypsilanti, MI: High/Scope.

High/Scope Educational Research Foundation and Abt Associates Inc.

(1975) *The National Home Start Evaluation. Interim report VI.* Ypsilanti, MI: High/Scope and Abt Associates Inc.

Kreft, I. G. G., de Leeuw, J., and Aiken, L.

(1995) "The effect of different forms of centering in hierarchical linear modeling." *Multivariate Behavioral Research.* 30, 1-22.

Kreft, I. G. G., and de Leeuw, J.

(1998) *Analyzing multilevel data.* Thousand Oaks, CA: Sage.

Layzer, J. I., Goodson, B., and Layzer, J. A.

(1990) *Evaluation of Project Giant Step. Year two report: The study of program effects.* Cambridge, MA: Abt Associates Inc.

Longford, N. T., and Muthen, B. O.

(1992) "Factor analysis for clustered observations." *Psychometrika.* 57(4), 581-597.

Mikulecky, L., and Lloyd, P.

(1993) *The impact of workplace literacy programs: A new model for evaluating the impact of workplace literacy programs.* Philadelphia, PA: National Center on Adult Literacy/University of Pennsylvania.

Munnell, A. H., Tootell, G. M. B., Browne, L. E., and McEneaney, J.

(1996) "Mortgage lending in Boston: Interpreting HMDA data." *American Economic Review.* 86, 25-53.

Murnane, R. J., Willett, J. B., and Boudette, K. P.

(Summer 1995) Do high school dropouts benefit from obtaining a GED? *Educational Evaluation and Policy Analysis.* 17 (2), 133-147.

Murray, S., Langhorst, B., St.Pierre, R., and Swartz, J.

(January 1993) *Evaluating program effectiveness for the national Even Start evaluation: Deriving estimates of effect from reference groups.* Portland, OR: RMC Research Corporation.

Nord, C. W.

(In preparation) *Profile of Even Start eligible population. First draft.* Rockville, MD: Westat.

Quint, J. C., Polit, D. F., Bos, H., and Cave, G.

(September 1994) *New Chance: Interim findings on a comprehensive program for disadvantaged young mothers and their children*. New York, NY: Manpower Demonstration Research Corporation.

Rickard, P., Stiles, R., and Martois, J.

(1989) *Psychometric background and measurement issues related to the development of the CASAS*. San Diego, CA: CASAS.

St.Pierre, R., Swartz, J., Gamse, B., Nickse, R., Murray, S., Langhorst, B., Nickel, P., and Ryer, P.

(October 1991) *National evaluation of the Even Start Family Literacy Program: First year report*. Cambridge, MA: Abt Associates Inc.

St.Pierre, R., Swartz, J., Murray, S., Langhorst, B., and Nickel, P.

(1993a) *National evaluation of the Even Start Family Literacy Program: Second interim report*. Cambridge, MA: Abt Associates Inc.

St.Pierre, R., Swartz, J., Murray, S., Deck, D., and Nickel, P.

(1993b) *National evaluation of the Even Start Family Literacy Program: Report on effectiveness*. Cambridge, MA: Abt Associates Inc.

St.Pierre, R., Goodson, B., Layzer, J., and Bernstein, L.

(May 1994) *National impact evaluation of the Comprehensive Child Development Program Report to Congress*. Cambridge, MA: Abt Associates Inc.

St.Pierre, R., Swartz, J., Gamse, B., Murray, S., Deck D., and Nickel, P.

(1995) *National evaluation of the Even Start Family Literacy Program: Final report* Cambridge, MA: Abt Associates Inc.

Schweinhart, L. J., and Weikart, D. P.

(1997) "The High/Scope Preschool Curriculum Comparison Study through age 23." *Early Childhood Research Quarterly*. 12, 117-143.

Seppanen, P. S., Godin, K. W., and Metzger, J. L.

(March 1993) *Observational study of Chapter 1-funded early childhood programs: Final report*. Portsmouth, NH: RMC Research Corporation.

Shore, R.

(1997) *Rethinking the brain: New insights into early development*. New York, NY: Work and Family Institute.

Singer, J. D.

(In press) “Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models.” To appear in *Journal of Educational and Behavioral Statistics*. Spring 1999.

Sticht, T.

(January 1990) *Testing and assessment in adult basic education and English-as-a-second-language programs*. San Diego, CA: Applied Behavioral and Cognitive Sciences, Inc.

Stites, R., Wagner, D., Foley, E., and St.Pierre, R.

(1996) *Background and context of adult basic education services for first-level learners: Draft*. Prepared under contract to the Planning and Evaluation Service, U.S. Department of Education by Abt Associates Inc. and National Center on Family Literacy.

Tao, F., Swartz, J., St.Pierre, R., and Tarr, H.

(1997) *National evaluation of the Even Start Family Literacy Program: 1995 interim report*. Washington, DC: U.S. Department of Education, Planning and Evaluation Service.

Tao, F., Gamse, B., and Tarr, H.

(1998) *National evaluation of the Even Start Family Literacy Program: 1996 interim report*. Washington, DC: U.S. Department of Education, Planning and Evaluation Service.

Travers, J., Nauta, M., and Irwin, N.

(1982) *The effects of a social program: Final report of the Child and Family Resource Program's Infant-Toddler Component*. Cambridge, MA: Abt Associates Inc.

U.S. Bureau of the Census

(March 1997) *CPS Publications - Educational attainment of people 25 years old and older, by sex: March 1997*. [On-line]. Accessed 5/8/98: http://www.bls.census.gov/cps/pub/1997/educ_att.htm

U.S. Bureau of the Census

(March 1997) “Table 1. Selected social characteristics of all persons and Hispanic persons, by type.” *Current Population Survey (CPS): March 1997. Internet release date: February 3, 1998*. [On-line]. Accessed 5/7/98: http://www.census.gov/population/socdemo/hispanic/cps96/sumtab-1.txt

U.S. Bureau of the Census

(March 1997) "Table 2. Selected characteristics of the foreign-born population by year of entry: March 1997." *Current Population Survey (CPS): March 1997. Table published March 1998.* [On-line]. Accessed 5/14/98: http://www.census.gov/population/socdemo/forein/97/ppltab2.txt

U.S. Congress

(1994) *Improving America's Schools Act. Report 103-761.* Washington, DC: U.S. Government Printing Office.

U.S. General Accounting Office

(March 1998) *Head Start Programs: Participant characteristics, services, and funding.* GAO/HEHS-98-65. Washington, DC. U.S. General Accounting Office.

Walker, D., Bane, M. J., and Bryk, A.

(1973) *The quality of Head Start Planned Variation data.* Cambridge, MA: The Huron Institute.

Willett, J. B.

(1988) "Questions and answers in the measurement of change." E. Rothkopf (Ed.), *Review of research in education.* 1988-89, 345-422. Washington, DC: American Educational Research Association.

Willett, J. B.

(1997) "Measuring change: What individual growth modeling buys you." Amsel, E., and Renninger, K.A. (Eds.*), Change and development: Issues of theory, method, and application.* 213-243. Mahwah, NJ: Erlbaum.

Zimmerman, I. L., Steiner, V. G., and Pond, R. E.

(1992) *Preschool Language Scale-3: Examiner's manual.* San Antonio, TX: The Psychological Corporation, Harcourt Brace Jovanovich, Inc.

APPENDIX A: EVEN START LEGISLATION

PART B—EVEN START FAMILY LITERACY PROGRAMS

SEC. 1201. STATEMENT OF PURPOSE.

It is the purpose of this part to help break the cycle of poverty and illiteracy by improving the educational opportunities of the Nation's low-income families by integrating early childhood education, adult literacy or adult basic education, and parenting education into a unified family literacy program, to be referred to as 'Even Start.'

The program shall—

(1) be implemented through cooperative projects that build on existing community resources to create a new range of services;

(2) promote achievement of the National Education Goals; and

(3) assist children and adults from low-income families to achieve to challenging State content standards and challenging State student performance standards.

SEC. 1202. PROGRAM AUTHORIZED.

(a) Reservation for Migrant Programs, Outlying Areas, and Indian Tribes.—

(1) In general.—For each fiscal year, the Secretary shall reserve 5 percent of the amount appropriated under section 1002(b) for programs, under such terms and conditions as the Secretary shall establish, that are consistent with the purpose of this part, and according to their relative needs, for—

(A) children of migratory workers;

(B) the outlying areas; and

(C) Indian tribes and tribal organizations.

(2) Special rule.—If the amount of funds made available under this subsection exceeds $4,600,000, the Secretary shall award a grant, on a competitive basis, of sufficient size and for a period of sufficient duration to demonstrate the effectiveness of a family literacy program in a prison that houses women and their preschool age children and that has the capability of developing a program of high quality.

(b) Reservation for Federal Activities.—From amounts appropriated under section 1002(b), the Secretary may reserve not more than three percent of such amounts or the amount reserved to carry out the activities described in paragraphs (1) and (2) of subsection (a) for the fiscal year 1994, whichever is greater, for purposes of—

(1) carrying out the evaluation required by section 1209; and

(2) providing, through grants or contracts with eligible organizations, technical assistance, program improvement, and replication activities.

(c) Reservation for Grants.—

(1) Grants authorized.—In any fiscal year in which the amount appropriated to carry out this part exceeds the amount appropriated to carry out this part for the preceding fiscal year, the Secretary may reserve such funds in excess of the amount appropriated for such preceding fiscal years as do not exceed $1,000,000 to award grants, on a competitive basis, to States to enable such States to plan and implement, statewide family literacy initiatives to coordinate and integrate existing Federal, State, and local literacy resources consistent with the purposes of this part. Such coordination and integration shall include funds available under the Adult Education Act, Head Start, Even Start, and the Family Support Act of 1988.

(2) Matching requirement.—The Secretary shall not make a grant to a State under paragraph (1) unless the State agrees that, with respect to the costs to be incurred by the eligible consortium in carrying out the activities for which the grant was awarded, the State will make available non-Federal contributions in an amount equal to not less than the Federal funds provided under the grant.

(d) State Allocation.—

(1) In general.—From amounts appropriated under section 1002(b) and not reserved under subsections (a), (b), and (c), the Secretary shall make grants to States from allocations under paragraph (2).

(2) Allocations.—Except as provided in paragraph (3), from the total amount available for allocation to States in any fiscal year, each State shall be eligible to receive a grant under paragraph (1) in an amount that bears the same ratio to such total amount as the amount allocated under part A to that State bears to the total amount allocated under that section to all the States.

(3) Minimum.—No State shall receive a grant under paragraph (1) in any fiscal year in an amount which is less than $250,000, or one-half of 1 percent of the amount appropriated under section 1002(b) and not reserved under subsections (a), (b), and (c) for such year, whichever is greater.

(e) Definitions.—For the purpose of this part—

(1) the term 'eligible entity' means a partnership composed of both—

(A) a local educational agency; and

(B) a nonprofit community-based organization, a public agency other than a local educational agency, an institution of higher education, or a public or private nonprofit organization other than a local educational agency, of demonstrated quality;

(2) the term 'eligible organization' means any public or private nonprofit organization with a record of providing effective services to family literacy providers, such as the National Center for Family Literacy, Parents as Teachers, Inc., the Home Instruction Program for Preschool Youngsters, and the Home and School Institute, Inc.;

(3) the terms 'Indian tribe' and 'tribal organization' have the meanings given such terms in section 4 of the Indian Self-Determination and Education Assistance Act; and

(4) the term 'State' includes each of the 50 States, the District of Columbia, and the Commonwealth of Puerto Rico.

SEC. 1203. STATE PROGRAMS.

(a) State Level Activities.—Each State that receives a grant under section 1202(d)(1) may use not more than 5 percent of the grant funds for the costs of—

(1) administration; and

(2) providing, through one or more subgrants or contracts, technical assistance for program improvement and replication, to eligible entities that receive subgrants under subsection (b).

(b) Subgrants for Local Programs.—

(1) In general.—Each State shall use the grant funds received under section 1202(d)(1) and not reserved under subsection (a) to award subgrants to eligible entities to carry out Even Start programs.

(2) Minimum.—No State shall award a subgrant under paragraph (1) in an amount less than $75,000, except that a State may award one subgrant in each fiscal year of sufficient size, scope, and quality to be effective in an amount less than $75,000 if, after awarding subgrants under paragraph (1) for such fiscal year in amounts of $75,000 or greater, less than $75,000 is available to the State to award such subgrants.

SEC. 1204. USES OF FUNDS.

(a) In General.—In carrying out an Even Start program under this part, a recipient of funds under this part shall use such funds to pay the Federal share of the cost of providing intensive family-centered education programs that involve parents and children, from birth through age seven, in a cooperative effort to help parents become full partners in the education of their children and to assist children in reaching their full potential as learners.

(b) Federal Share Limitation.—

(1) In general.—

(A) Except as provided in paragraph (2), the Federal share under this part may not exceed—

(i) 90 percent of the total cost of the program in the first year that such program receives assistance under this part or its predecessors authority;

(ii) 80 percent in the second such year;

(iii) 70 percent in the third such year;

(iv) 60 percent in the fourth such year; and

(v) 50 percent in any subsequent such year.

(B) The remaining cost of a program assisted under this part may be provided in cash or in kind, fairly evaluated and may be obtained from any source, including other Federal funds under this Act.

(2) Waiver.—The State educational agency may waive, in whole or in part, the cost-sharing requirement described in paragraph (1) for an eligible entity if such entity—

(A) demonstrates that such entity otherwise would not be able to participate in the program assisted under this part; and

(B) negotiates an agreement with the State educational agency with respect to the amount of the remaining cost to which the waiver will be applicable.

(3) Prohibition.—Federal funds provided under this part may not be used for the indirect costs of a program assisted under this part, except that the Secretary may waive this paragraph if an eligible recipient of funds reserved under section 1202(a)(1)(C) demonstrates to the Secretary's satisfaction that such recipient otherwise would not be able to participate in the program assisted under this part.

SEC. 1205. PROGRAM ELEMENTS.

Each program assisted under this part shall—

(1) include the identification and recruitment of families most in need of services provided under this part, as indicated by a low level of income, a low level of adult literacy or English language proficiency of the eligible parent or parents, and other need-related indicators;

(2) include screening and preparation of parents, including teenage parents and children to enable such parents to participate fully in the activities and services provided under this part, including testing, referral to necessary counseling, other developmental and support services, and related services;

(3) be designed to accommodate the participants' work schedule and other responsibilities, including the provision of support services, when such services,are unavailable from other sources, necessary for participation in the activities assisted under this part, such as—

(A) scheduling and locating of services to allow joint participation by parents and children;

(B) child care for the period that parents are involved in the program provided under this part; and

(C) transportation for the purpose of enabling parents and their children to participate in programs authorized by this part;

(4) include high-quality intensive instructional programs that promote adult literacy and empower parents to support the educational growth of their children, developmentally appropriate early childhood educational services, and preparation of children for success in regular school programs;

(5) include special training of staff, including child care staff, to develop the skills necessary to work with parents and young children in the full range of instructional services offered through this part;

(6) provide and monitor integrated instructional services to participating parents and children through home-based programs;

(7) operate on a year-round basis, including the provision of some program services, instructional or enrichment, during the summer months;

(8) be coordinated with—

(A) programs assisted under other parts of this title and this Act;

(B) any relevant programs under the Adult Education Act, the Individuals with Disabilities Education Act, and the Job Training Partnership Act; and

(C) the Head Start program, volunteer literacy programs, and other relevant programs;

(9) ensure that the programs will serve those families most in need of the activities and services provided by this part; and

(10) provide for an independent evaluation of the program.

SEC. 1206. ELIGIBLE PARTICIPANTS.

(a) In General.—Except as provided in subsection (b), eligible participants in an Even Start program are—

(1) a parent or parents—

(A) who are eligible for participation in an adult basic education program under the Adult Education Act; or

(B) who are within the State's compulsory school attendance age range, so long as a local educational agency provides (or ensures the availability of) the basic education component required under this part; and

(2) the child or children, from birth through age seven, of any individual described in paragraph (1).

(b) Eligibility for Certain Other Participants.—

(1) In general.—Family members of eligible participants described in subsection (a) may participate in activities and services provided under this part, when appropriate to serve the purpose of this part.

(2) Special rule.—Any family participating in a program assisted under this part that becomes ineligible for such participation as a result of one or more members of the family becoming ineligible for such participation may continue to participate in the program until all members of the family become ineligible for such participation, which—

(A) in the case of a family in which ineligibility was due to the child or children of such family attaining the age of eight, shall be in two years or when the parent or parents become ineligible due to educational advancement, whichever occurs first; and

(B) in the case of a family in which ineligibility was due to the educational advancement of the parent or parents of such family, shall be when all children in the family attain the age of eight.

SEC. 1207. APPLICATIONS.

(a) Submission.—To be eligible to receive a subgrant under this part, an eligible entity shall submit an application to the State educational agency in such form and containing or accompanied by such information as the State educational agency shall require.

(b) Required Documentation.—Each application shall include documentation, satisfactory to the State educational agency, that the eligible entity has the qualified personnel needed—

(1) to develop, administer, and implement an Even Start program under this part; and

(2) to provide access to the special training necessary to prepare staff for the program, which may be offered by an eligible organization.

(c) Plan.—

(1) In general.—Such application shall also include a plan of operation for the program which shall include—

(A) a description of the program goals;

(B) a description of the activities and services that will be provided under the program, including a description of how the program will incorporate the program elements required by section 1205;

(C) a description of the population to be served and an estimate of the number of participants to be served;

(D) as appropriate, a description of the applicant's collaborative efforts with institutions of higher education, community-based organizations, the State educational agency, private elementary schools, or other eligible organizations in carrying out the program for which assistance is sought;

(E) a statement of the methods that will be used—

(i) to ensure that the programs will serve families most in need of the activities and services provided by this part;

(ii) to provide services under this part to individuals with special needs, such as individuals with limited English proficiency and individuals with disabilities; and

(iii) to encourage participants to remain in the program for a time sufficient to meet the program's purpose; and

(F) a description of how the plan is integrated with other programs under this Act, the Goals 2000: Educate America Act, or other Acts, as appropriate, consistent with section 14306.

(2) Duration of the plan.—Each plan submitted under paragraph (1)(A) shall—

(A) remain in effect for the duration of the eligible entity's participation under this part; and

(B) be periodically reviewed and revised by the eligible entity as necessary.

(d) Consolidated Application.—The plan described in subsection (c)(1)(F) may be submitted as part of a consolidated application under section 14302.

SEC. 1208. AWARD OF SUBGRANTS.

(a) Selection Process.—

(1) In general.—The State educational agency shall establish a review panel in accordance with paragraph (3) that will approve applications that—

(A) are most likely to be successful in—

(i) meeting the purpose of this part; and

(ii) effectively implementing the program elements required under section 1205;

(B) demonstrate that the area to be served by such program has a high percentage or a large number of children and families who are in need of such services as indicated by high levels of poverty, illiteracy, unemployment, limited-English proficiency, or other need-related indicators, including a high percentage of children to be served by the program who reside in a school attendance area eligible for participation in programs under part A;

(C) provide services for at least a three-year age range, which may begin at birth;

(D) demonstrate the greatest possible cooperation and coordination between a variety of relevant service providers in all phases of the program;

(E) include cost-effective budgets, given the scope of the application;

(F) demonstrate the applicant's ability to provide the Federal share required by section 1204(b);

(G) are representative of urban and rural regions of the State; and

(H) show the greatest promise for providing models that may be adopted by other local educational agencies.

(2) Priority for subgrants.—The State educational agency shall give priority for subgrants under this subsection to applications that—

(A) target services primarily to families described in paragraph (1)(B); or

(B) are located in areas designated as empowerment zones or enterprise communities.

(3) Review panel.—A review panel shall consist of at least three members, including one early childhood professional, one adult education professional, and one or more of the following individuals:

(A) A representative of a parent-child education organization.

(B) A representative of a community-based literacy organization.

(C) A member of a local board of education.

(D) A representative of business and industry with a commitment to education.

(E) An individual who has been involved in the implementation of programs under this title in the State.

(b) Duration.—

(1) In general.—Subgrants under this part may be awarded for a period not to exceed four years.

(2) Startup period.—The State educational agency may provide subgrant funds to an eligible recipient, at such recipient's request, for a three- to six-month startup period during the first year of the four-year grant period, which may include staff recruitment and training, and the coordination of services, before requiring full implementation of the program.

(3) Continuing eligibility.—In awarding subgrant funds to continue a program under this part for the second, third, or fourth year, the State educational agency shall review the progress being made toward meeting the objectives of the program after the conclusion of the startup period, if any.

(4) Insufficient progress.—The State educational agency may refuse to award subgrant funds if such agency finds that sufficient progress has not been made toward meeting such objectives, but only after affording the applicant notice and an opportunity for a hearing.

(5) Grant renewal.—

(A) An eligible entity that has previously received a subgrant under this part may reapply under this part for additional subgrants. An eligible recipient may receive funds under this part for a period not to exceed eight years.

(B) The Federal share of any subgrant renewed under subparagraph (A) shall not exceed 50 percent in any fiscal year.

SEC. 1209. EVALUATION.

From funds reserved under section 1202(b)(1), the Secretary shall provide for an independent evaluation of programs assisted under this part—

(1) to determine the performance and effectiveness of programs assisted under this part; and

(2) to identify effective Even Start programs assisted under this part that can be duplicated and used in providing technical assistance to Federal, State, and local programs.

SEC. 1210. CONSTRUCTION.

Nothing in this part shall be construed to prohibit a recipient of funds under this part from serving students participating in Even Start simultaneously with students with similar educational needs, in the same educational settings where appropriate.

APPENDIX B: ADDITIONAL DATA TABLES

Exhibit B.1: Number of Projects that Submitted 1996-97 Even Start National Evaluation Data, by State and Type of Project (Referenced in Chapter 2)

State	State-Administered	Migrant Education	Tribal	Total
Alabama	13	0	0	**13**
Alaska	5	0	1	**6**
Arizona	9	0	1	**10**
Arkansas	10	1	0	**11**
California	52	0	2	**54**
Colorado	8	0	1	**9**
Connecticut	4	0	0	**4**
Delaware	2	0	0	**2**
District of Columbia	1	0	0	**1**
Florida	19	1	0	**20**
Georgia	12	0	0	**12**
Hawaii	1	0	0	**1**
Idaho	2	0	0	**2**
Illinois	33	0	0	**33**
Indiana	7	0	0	**7**
Iowa	5	0	0	**5**
Kansas	6	1	0	**7**
Kentucky	10	2	0	**12**
Louisiana	12	1	0	**13**
Maine	5	0	0	**5**
Maryland	10	0	0	**10**
Massachusetts	11	0	0	**11**
Michigan	16	2	0	**18**
Minnesota	5	0	0	**5**
Mississippi	13	0	0	**13**
Missouri	10	0	0	**10**
Montana	4	1	1	**6**
Nebraska	6	0	0	**6**
Nevada	5	0	0	**5**
New Hampshire	4	0	0	**4**
New Jersey	11	0	0	**11**
New Mexico	6	1	0	**7**
New York	34	1	0	**35**
North Carolina	9	1	0	**10**
North Dakota	6	0	0	**6**
Ohio	24	0	0	**24**
Oklahoma	11	0	0	**11**
Oregon	7	1	0	**8**
Pennsylvania	22	1	0	**23**
Puerto Rico	16	0	0	**16**

(Exhibit continues on the next page.)

Exhibit B.1: Number of Projects that Submitted 1996-97 Even Start National Evaluation Data, by State and Type of Project (Referenced in Chapter 2) (Continued)

State	State-Administered	Migrant Education	Tribal	Total
Rhode Island	3	0	0	**3**
South Carolina	11	0	0	**11**
South Dakota	3	0	0	**3**
Tennessee	22	0	0	**22**
Texas	42	3	0	**45**
Utah	4	0	1	**5**
Vermont	4	0	0	**4**
Virginia	7	0	0	**7**
Washington	11	0	3	**14**
West Virginia	7	0	0	**7**
Wisconsin	13	0	0	**13**
Wyoming	5	0	0	**5**
Total	**578**	**17**	**10**	**605**

Note: A total of 637 projects operated the Even Start Program in 1996-97. Of these, 605 (95 percent) submitted data for the National Even Start Evaluation.

Exhibit reads: In 1996-97, there were 13 Even Start projects in Alabama, all of which were state-administered.

Exhibit B.2: Percent of Children Participating in Non-Even Start Educational Programs Before and at the Time of Enrolling in Even Start: 1994-95 Participants and 1995-96 and 1996-97 New Enrollees (Referenced in Chapter 3)

Type of Program	1994-95 Participants	1995-96 New Enrollees	1996-97 New Enrollees
Prior to Enrollment in Even Start			
Kindergarten	11%	12%	12%
Head Start	10%	12%	13%
Other preschool or infant/toddler program	8%	9%	9%
Primary school (Grades 1-3)	7%	6%	8%
Title I preschool	4%	4%	4%
Early intervention, early childhood special education	3%	3%	3%
None	43%	57%	58%
At the Time of Enrollment in Even Start			
Primary school (Grades 1-3)	11%	11%	11%
Kindergarten	9%	10%	9%
Head Start	7%	9%	9%
Other preschool or infant/toddler program	5%	7%	7%
Early intervention, early childhood special education	3%	3%	3%
Title I preschool	2%	3%	3%
None	38%	50%	52%

Exhibit reads: 12 percent of children who enrolled in Even Start in 1996-97 had attended kindergarten prior to enrolling in Even Start.

BEST COPY AVAILABLE

Exhibit B.3: Percent of Children with Special Needs, by Type of Needs: 1994-95, 1995-96, and 1996-97 Participants (Referenced in Chapter 3)

Type of Special Needs	1994-95	1995-96	1996-97
Speech/language impairment	41%	42%	44%
Developmentally delayed	35%	33%	29%
Specific learning disability	15%	15%	13%
Serious emotional disturbance	6%	6%	6%
Visual impairment	5%	5%	5%
Orthopedic impairment	4%	5%	5%
Hearing impairment	5%	5%	4%
Mental retardation	3%	3%	3%
Other	20%	20%	23%

Note: The percentages are based on 5,078 children whom Even Start staff described as having special needs. Multiple disabilities could be reported for each child.

Exhibit reads: In 1996-97, 44 percent of children who were identified as having special needs were reported to have speech/language impairments.

Exhibit B.4: Correlations Among Family Need Indicators (1996-97) (Referenced in Chapter 3)

	A	B	C	D	E	F
A. Income at or below the federal poverty index						
B. Low education: 9th grade or less	.06					
C. Single parent	.20	-.12				
D. Receive government assistance and/or welfare as primary source of income	.32	-.04	.42			
E. Limited English proficiency	-.01	.34	-.27	-.28		
F. Four or more children below age 16 in family	.11	.09	-.03	.04	.08	
G. Child(ren) with special needs	.01	-.02	.00	.05	-.08	.05

Exhibit reads: The correlation between (A) family income at or below the federal poverty index and (D) family receiving government assistance is .32.

Exhibit B.5: Community-Based Organization Partners in Even Start Projects (1996-97) (Referenced in Chapter 4)

Community-Based Organization	Percent of Projects
Local, county, or state government agency	23%
Community college, college, or university	17%
Head Start	16%
Trade or technical school	3%
Other preschool or day care program	3%
Volunteer group	3%
Library	2%
Foundation, professional association, fraternal organization	1%
Tribal organization	1%
Church, temple, mosque, or other religious group	<1%
Other community-based organization	32%

Exhibit reads: In 1996-97, 23 percent of reporting Even Start projects had local, county, or state government agencies as partners.

BEST COPY AVAILABLE

Exhibit B.6: Percent of Projects Providing Inservice Training for Most of Their Staff, by Training Topics (1996-97) (Referenced in Chapter 4)

Areas of Inservice Training	Percent of Projects
Program Coordination	
Program planning or improvement	76%
Team building	70%
Retention strategies	57%
Recruitment	54%
Conducting home visits	53%
Local evaluation	51%
Interagency collaboration	49%
First aid, CPR, or other procedures	39%
Visiting other programs	29%
National evaluation	25%
Adult Education Services	
Assessment	37%
Reading, writing, math, social studies	26%
Vocational/occupational subjects	15%
ESL	14%
Parenting Education Services	
Parent and child activities	70%
Child rearing, child development	62%
Parent's role as a teacher	61%
Life skills	47%
Early Childhood Education Services	
Child development	60%
Assessment	48%
Classroom or behavior management	44%
School readiness	43%
ESL	17%
Adapting Services to Participant Needs and Backgrounds	
Family or personal problems	49%
Ethnic/cultural backgrounds	45%
Family educational needs	42%
Learners with special needs	30%
Other	**53%**

Exhibit reads: In 1996-97, 76 percent of projects provided inservice training on program planning or improvement to most of their staff.

BEST COPY AVAILABLE

Exhibit B.7: Number of Instructors, by Salary Source and Student Contact (1996-97) (Referenced in Chapter 4)

Teaching Assignment	Paid by Even Start Funds Average (Range)	Paid by Local Match Average (Range)	Paid by Collaborating Agency Average (Range)
Full-time instructor, teaching mostly Even Start students	1.5 (0-14)	0.4 (0-100)	0.2 (0-21)
Part-time instructor, teaching mostly Even Start students	1.7 (0-31)	0.5 (0-100)	0.4 (0-7)
Full-time instructor, teaching Even Start and other students	0.1 (0-10)	0.6 (0-54)	0.6 (0-30)
Part-time instructor, teaching Even Start and other students	0.2 (0-15)	0.5 (0-75)	0.5 (0-40)
Total	**3.6 (0-32)**	**2.0 (0-200)**	**1.7 (0-45)**

Note: This analysis was based on 605 projects included in the 1996-97 evaluation.

***Exhibit reads:** In 1996-97, Even Start projects had an average of 1.5 full-time instructors (paid by Even Start funds) who taught mostly Even Start students.*

Exhibit B.8: Solutions to Implementation Barriers (1996-97) (Referenced in Chapter 4)

Recruiting Eligible Families (160 projects, 27 percent)

- Collaborate with other agencies and programs, especially Head Start, that provide services to eligible families
- Make personal contact with families, e.g., canvass neighborhoods; make cold calls and home visits to prospective parents; visit sites where families congregate
- Post flyers and posters; distribute brochures;
- Word-of-mouth; involve Even Start parents in recruitment
- Provide transportation and/or hold services in convenient location
- Implement incentives
- Get referrals from school district, school counselors; make presentations to PTA
- Use local media to advertise the program
- Expand program and schedule classes to accommodate to parents' schedules
- Involve community leaders in recruitment; work directly with churches, civic groups, and local government agencies
- Target specific group(s), e.g., teen mothers, Head Start families, welfare recipients
- Dedicate staff to recruiting and community outreach
- Improve screening; survey prospective families to determine needs

Recruiting Families Most in Need (65 projects, 11 percent)

- Network with collaborating agencies, e.g., use Head Start waiting list
- Go door-to-door; do home visits
- Improve referral, screening and intake procedures
- Involve Even Start parents and community in recruitment
- Use point system to rank families in terms of need
- Improve marketing and promotion of the program
- Offer incentives for participation
- Make services more accessible to families, involve parents in scheduling, provide transportation and child care

(Exhibit continues on the next page.)

BEST COPY AVAILABLE

Exhibit B.8: Solutions to Implementation Barriers (1996-97) (Referenced in Chapter 4) (Continued)

Improving Retention and Motivation of Participants (203 projects, 34 percent)

- Offer incentives, especially field trips, family nights, and cash, to reward good attendance and celebrate goal attainment
- Maximize personal contact with families; follow up on absences with home visits, letters, and phone calls
- Assist in meeting families' social service needs; provide counseling and case management by coordinating with other agencies
- Involve parents in program planning and as leaders, create parent advisory board
- Improve screening, spend more time on orientation, and establish participation guidelines and contracts
- Provide more home-based services and individualized tutoring
- Maximize flexibility of service delivery to accommodate working parents
- Provide guest speakers and motivational workshops
- Encourage peer support and "buddy" systems among parents
- Provide transportation; provide child care
- Make adult education component more job-oriented, e.g., provide bridge programs with community colleges; offer computer classes, career counseling
- Personalize curriculum according to participants' needs and interests; increase cultural relevancy of lessons
- Implement lending library of educational materials
- Publish program newsletter

Improving Attendance (202 projects, 33 percent)

- Reward good attendance with field trips, family nights, meals, awards, announcements in program newsletter, raffles, etc.
- Maintain regular contact with families; follow-up on absenteeism with home visits, phone calls, and notes
- Establish and enforce strict attendance policy through parent contracts, clocking in participants, etc.
- Provide or subsidize transportation; provide child care
- Solicit parents' input in decision making, program planning, and overcoming barriers to attendance
- Work with other agencies to provide counseling and case management
- Offer flexible scheduling to accommodate working parents, e.g., hold evening and weekend adult education classes and give advance notice for special events
- Formulate individualized education plans, increase cultural relevancy of curriculum materials, and provide more home-based instruction and home study
- Focus adult education on job-related skills and experience, e.g., more computer training

Coordinating with Other Agencies (78 projects, 13 percent)

- Participate in local inter-agency councils, community action teams, and collaborative consortia; have regular meetings and phone contact; form cooperative relationships with school system; hold monthly meeting with school principals and use Title I and classroom teachers; move program to school system department with better access to outside agencies; share in-kind resources, e.g., curriculum, staff, child care, evaluators
- Cross-train staff through joint staff development activities and inservices; develop release form to share information related to case management of families
- Promote the program through newsletters, introductory packets, service agency fairs, open houses, and presentations to potential collaborators
- Enlist state and local administrator(s) to facilitate collaboration; attend state conferences; obtain state grant

(Exhibit continues on the next page.)

Exhibit B.8: Solutions to Implementation Barriers (1996-97) (Referenced in Chapter 4) (Continued)

Obtaining Sufficient Financial Resources (99 projects, 16 percent)

- Seek grants from federal and state agencies, private foundations, and corporations
- Coordinate with other social service agencies to provide services and obtain resources; establish community advisory board
- Solicit monetary and in-kind contributions from local businesses, schools, and collaborating agencies
- Market the program to the community; hold fundraisers; hire PR person
- Reduce service intensity and limit the number of participants served

Understanding or Meeting National Evaluation Requirements (45 projects, 7 percent)

- Attend national evaluation conference and regional workshops and conferences
- Call contractor-maintained technical assistance helpline
- Provide staff training; consult an evaluator
- Modify local record system to meet reporting requirements of national evaluation and collect evaluation data on an ongoing basis
- Study ESIS manual and other how-to materials
- Share information with other Even Start program directors

Understanding or Meeting Local Evaluation Requirements (28 projects, 5 percent)

- Consult with qualified local evaluator
- Set up computer tracking system to document testing and update participant records
- Network with other Even Start program directors and share assessment tools
- Review evaluation plan with state coordinator; work with state funding agencies to streamline reporting requirements
- Train staff in evaluation

Hiring and Retaining Qualified Staff (72 projects, 12 percent)

- Advertise openings in local newspaper; recruit from school personnel departments and local colleges; expand search radius
- Increase salaries and benefits
- Provide extensive training and inservice opportunities
- Restructure staff assignments; cross-train
- Recruit model Even Start parents
- Clarify roles, responsibilities, and expectations up-front
- Hire staff who want to work part-time
- Involve staff in program planning

Obtaining Adequate Facilities, Space, or Equipment (124 projects, 21 percent)

- Hold classes in public schools, libraries, community centers, churches, apartment complexes, YWCA, and community colleges
- Share space with other programs; relocate to larger facility; open new facility
- Restructure service delivery to fit times when facilities are available, e.g., evenings, weekends, the summer; consolidate sites with low enrollment
- Use mobile education units
- Apply for grants to fund capital expenditures
- Modify existing space
- Develop partnerships with the business community, the local housing authority
- Split services across multiple sites
- Provide more home-based services

(Exhibit continues on the next page.)

Exhibit B.8: Solutions to Implementation Barriers (1996-97) (Referenced in Chapter 4) (Continued)

Arranging or Providing Adequate Transportation (132 projects, 22 percent)

- Encourage student car pooling; reimburse parents for gas mileage; provide transportation stipends
- Share vehicles and transportation costs with other social service programs and agencies
- Use public transportation; purchase bus passes; negotiate with public transportation officials to modify bus routes
- Contract-out transportation services, e.g., with taxi company
- Purchase or rent van(s); have staff members earn commercial driver's license; hire a driver
- Make arrangements with school district for families to ride public school bus
- Have staff and volunteers use their own cars to transport families
- Redesign transportation routes and/or relocate classes
- Provide more home-based services
- Create a staff position dedicated to solving transportation issues
- Help Even Start parents obtain driver's licenses
- Network with churches, community colleges, and other groups to use their vehicles
- Expand Community Loan program to help families purchase cars

Meeting Social Service Needs of Families (62 projects, 10 percent)

- Refer families to other social service agencies in the community and forge collaborative partnerships; participate in inter-agency council; develop a consortium of social service agencies; develop a directory of local social services and use a computer system to facilitate communication among agencies and programs
- Extend assessment period to assist families with access to needed social services; establish a case management system; hire a qualified person to deal with families' social service and mental health needs
- Hold staff inservices on how to address various problems of Even Start families, e.g., substance abuse, domestic violence, basic needs, and on how to make referrals
- Develop support groups for Even Start parents; invite representatives from social service agencies to speak at parent meetings
- Develop a resource directory of local social services and make available to staff and families; use computer system to link up with other social service agencies for referrals and intake

Finding Quality Child Care (91 projects, 15 percent)

- Provide on-site child care and train staff and volunteers as child care workers; acquire a larger facility
- Collaborate with other programs and social service agencies that provide child care; forge partnerships with schools and community colleges to provide child care, e.g., use high school day care center; work out cooperative arrangement with high school child development classes
- Develop resource list of licensed local child care providers
- Subcontract out child care to existing providers; work with day care centers that accept public aid payments; provide families with child care stipends or help them with applications for child care assistance
- Work out a plan for Even Start parents to share in caring for each other's children; provide workshops on child care as part of parenting education; work with CBO to get homes licensed; hold parent workshops on how to select a child care provider
- Apply for grant to fund child care
- Develop a network of local child care providers to train others in child care
- Provide more home-based services; allow parents to bring infants to class and/or be flexible about the minimum age for entry into Even Start preschool

(Exhibit continues on the next page.)

Exhibit B.8: Solutions to Implementation Barriers (1996-97) (Referenced in Chapter 4) (Continued)

Understanding and Working Within the Federal Guidelines (22 projects, 4 percent)

- Attend Even Start national and regional conferences
- Keep in contact with state coordinator
- Assign more staff to evaluation and allocate more time to complete the forms
- Consult with other Even Start projects
- Meet frequently with independent evaluator to keep abreast of program guidelines
- Obtain sufficient financial resources
- Maintain contact with federal grant representative
- Study national evaluation materials and use as guidelines
- Obtain copy of the federal regulations
- Gain experience in using the ESIS
- Serve on Welfare-to-Work Committee
- Consult legal counsel about immigration reform

Understanding or Working Within the State Guidelines (13 projects, 2 percent)

- Keep in contact with state coordinator; ask for technical assistance from state staff when needed, e.g., in identifying collaborative partners and alternative funding sources; in writing grants
- Work with ADE and Even Start Coordinator
- Meet frequently with independent evaluator to keep abreast of guidelines
- Attend all state directors' meetings and conferences; work closely with the state Department of Public Instruction; create an Even Start discussion group for providers to address concerns

Working Within the Confines of the Local Model (20 projects, 3 percent)

- Streamline program model: combine multiple sites into one; reduce number of collaborative partners to make better use of existing community resources; modify ECE class size
- Work on relationships with collaborative partners, especially Head Start
- Modify curriculum and teaching methods to reflect focus on literacy; provide ongoing staff inservice training in literacy
- Revise participant eligibility/screening, e.g., institute TB testing and criminal record checks
- Keep in direct contact with state coordinator
- Attend workshop and focus on PACT
- Take more active role on advisory committee
- Hold problem-solving meetings with Even Start staff and school principals
- Change scheduling to accommodate participants
- Institute home visiting model

Finding Adult, Parenting, or Early Childhood Education Services Locally (24 projects, 4 percent)

- Develop a coalition of local services providers and agencies; collaborate with other social services programs to fill in gaps in provision of the core components
- Provide services directly through Even Start
- Collaborate with local community colleges and adult education schools
- Recruit qualified staff and provide full-time salary and benefits to encourage them to stay
- Have staff wear multiple "hats," e.g., decrease caseload of home visitors so that they can provide ABE, GED, and ESL instruction in one home visit
- Seek state preschool funding to provide ECE
- Collaborate with school district adult education program
- Get input from primary school teachers

Exhibit reads: One frequently reported solution to recruiting eligible families was to collaborate with other agencies, especially Head Start, that provide services to eligible families.

Exhibit B.9: Instructional Services Offered in Three Core Components (Average Across Reporting Project Sites, 1996-97) (Referenced in Chapter 5)

Educational Area	Percent of Sites Reporting	Times Per Month	Hours per Month	Duration of Instruction in Months	Hours per Month of Home-Based Services	Hours per Year per Participant
Adult Basic Education (ABE)						
Beginning ABE (0-4)	79%	**12** (2-30)	**38** (1-131)	**10** (1-12)	**4.2** (1-80)	**390** (1-1,440)
Intermediate ABE (5-8)	83%	**12** (1-30)	**40** (1-160)	**10** (1-12)	**4.0** (1-80)	**412** (2-1,600)
ASE/GED Preparation (9-12)	89%	**13** (1-28)	**42** (2-160)	**10** (1-12)	**4.5** (1-80)	**430** (16-1,650)
ESL	60%	**12** (1-28)	**33** (2-160)	**10** (1-12)	**4.0** (1-37)	**335** (4-1,600)
Parenting Education						
Parent alone	94%	**7** (1-25)	**11** (1-80)	**10** (1-12)	**2.7** (1-27)	**105** (1-800)
Parent and child together	94%	**8** (1-28)	**9** (1-78)	**10** (1-12)	**2.9** (1-27)	**96** (1-858)
Early Childhood Education						
Under age 3	84%	**11** (1-30)	**39** (1-160)	**10** (1-12)	**3.1** (1-44)	**406** (2-1,920)
Ages 3 and 4	92%	**14** (1-30)	**54** (1-168)	**10** (1-12)	**2.9** (1-30)	**554** (1-1,920)
Age 5	81%	**14** (1-30)	**55** (1-168)	**10** (1-12)	**2.8** (1-27)	**553** (1-1,920)
Ages 6 and 7	67%	**13** (1-30)	**61** (1-168)	**10** (1-12)	**2.8** (1-32)	**588** (1-1,920)

Note: The percentages are based on the 655 project sites operated by the 605 projects included in evaluation analyses. The range of responses from all sites reporting is indicated in parentheses.

***Exhibit reads:** On average, beginning ABE sessions were offered 12 times per month, 38 hours per month, 10 months of the year, totaling 390 hours per year. On average, 4.2 hours per month of beginning ABE activities were conducted in participants' homes. Across 79 percent of the reporting sites, the hours offered annually for beginning ABE programs ranged from 1 to 1,440.*

Exhibit B.10: Characteristics of Even Start Educational Curricula (1996-97) (Referenced in Chapter 5)

		Locally Developed vs Acquired From External Sources		
Educational Area	Number of Sites Reporting	Mostly Locally Developed	Both	Mostly Acquired
Adult Basic Education	634	28%	36%	37%
Adult Secondary Education/GED Preparation	627	19%	30%	52%
English as a Second Language	493	31%	40%	29%
Parenting Education	649	38%	37%	25%
Early Childhood Education	646	35%	39%	27%

		Individualized vs Standardized		
Educational Area	Number of Sites Reporting	Mostly Individualized	Both	Mostly Standardized
Adult Basic Education	630	71%	22%	7%
Adult Secondary Education/GED Preparation	627	63%	25%	12%
English as a Second Language	496	60%	33%	7%
Parenting Education	649	51%	41%	8%
Early Childhood Education	645	58%	33%	9%

		Group Activities vs Working Alone		
Educational Area	Number of Sites Reporting	Mostly Group	Both	Mostly Alone
Adult Basic Education	625	17%	49%	34%
Adult Secondary Education/GED Preparation	627	10%	46%	44%
English as a Second Language	488	42%	39%	19%
Parenting Education	647	60%	33%	7%
Early Childhood Education	642	39%	53%	8%

		Learner vs Instructor Selected		
Educational Area	Number of Sites Reporting	Mostly Learner	Both	Mostly Instructor
Adult Basic Education	626	17%	40%	44%
Adult Secondary Education/GED Preparation	625	16%	36%	48%
English as a Second Language	490	16%	39%	45%
Parenting Education	647	32%	46%	22%
Early Childhood Education	644	22%	45%	34%

Exhibit reads: In 1996-97, 37 percent of project sites used mostly acquired curriculum materials in adult basic education programs.

BEST COPY AVAILABLE

Exhibit B.11: Other Reasons for Families Discontinuing Participation in Even Start (1996-97) (Referenced in Chapter 6)

Reasons	Number of Families
Family-Driven Reasons	
Health problems: serious illness, injury, surgery, hospitalization, recuperation (236); problem pregnancy (62); mental illness (8)	306
Pregnancy and/or on maternity leave; caring for newborn at home	244
Lack of transportation	117
Parent found a job; work schedule precludes regular participation	88
Family exited the shelter; family is homeless	83
Parent met goals and graduated from the program: unspecified (17), received GED (51), received high school diploma (7)	75
Enrolled in other programs	67
Family moved out of town or state	66
Child no longer in the home; placed in foster care; custodial parent gave up rights; child given up for adoption; eligible parent moved out	61
Parent attending postsecondary institution: technical school (21), community or four-year college (34)	55
Child care or daycare not available or not affordable	53
Unable to contact; address unknown	49
Enrolled but never returned or dropped out after first few classes	44
Temporary leave of absence, e.g., during summer	43
Parent incarcerated	34
Parent(s) did not participate; parent refused to participate	32
Death of participant: parent (14), child (6), other (10)	30
Parent looking for work	28
Child enrolled in regular preschool or kindergarten program	22
Parent(s) earn living as migrant worker(s)	21
Parent returned to high school	19
Family problems precluded participation	18
Scheduling conflicts with other social services program or class	16
Parent has substance abuse problem	15
Family left the country	14
Husband or male partner refused to allow to participate	11
Language barrier	10
Program-Driven Reasons	
Family no longer met eligibility criteria: child aged out (44); child too young (5); parent's TABE/CASAS scores too high (1); income too high (5); parent has a degree (1); no longer migrant (4); parent is a minor and cannot legally take GED (3); unspecified (21)	84
Program closed down due to lack of funds	68
Reduced scope of program due to lack of funds: insufficient staff (62), eliminated classes (2), dropped grade level (1)	65
Even Start site or center closed down or consolidated sites due to lack of funds	47

(Exhibit continues on the next page.)

Exhibit B.11: Other Reasons for Families Discontinuing Participation in Even Start (1996-97) (Referenced in Chapter 6) (Continued)

Reasons	Number of Families
Prison-based program; participants released or transferred	28
Program moved out of service area	25
Family suspended or expelled for tardiness, poor attendance, noncooperation, physical violence, etc.	21
Referred family to another program	10

Note: Of the 31,121 families for whom we received the year-end status, 13,643 (44 percent) had left Even Start during 1996-97. Projects reported "Other" reasons for termination for 1,037 families, or 8 percent of all families who left the program.

***Exhibit reads:** In 1996-97, 306 families left the Even Start program due to health problems.*

APPENDIX C: MULTIVARIATE ANALYSES IN CHAPTERS 5 AND 6

This appendix discusses the multivariate regression analyses reported in Chapters 5 and 6 of this report: the analysis variables and method used; the rationale for the approach; and detailed analysis results tables. The text in this appendix primarily refers to the Chapter 6 analyses with participation rates as dependent variables; however, the same analytic approach was used for analyses reported in both chapters.

ANALYSIS METHOD

Several major data analysis steps were involved in the multivariate analyses:

1) the creation of derived variables that "combined" related ESIS items into fewer variables representing higher-order constructs;

2) the systematic examination of statistical properties of all derived variables;

3) the identification of dependent and independent variables that represent key issues and topics associated with Even Start services, including preliminary correlational analyses of candidate variables to identify potential problems such as multicollinearity;

4) comparing results generated by several regression approaches, using a same set of variables, to select the most useful approach;

5) performing regression analyses on all dependent variables identified in steps 3 and 4; and

6) performing analyses of variance (ANOVAs) to further examine the independent variables that produced the strongest relationships with dependent variables in the regression analyses.

Derived variables were created by summing and/or averaging related ESIS items (e.g., averaging instructional hours offered across four levels of adult education and summing the types of organizations each project used as collaborating agencies). The derived variables achieved three important goals: (1) reducing to a manageable number the variables used in the multivariate analyses; (2) combining detailed ESIS data into variables that represent general concepts relevant to Even Start (e.g., home-based versus center-based services); and (3) increasing measurement reliability, where applicable.

The distributional characteristics of each derived variable were examined (e.g., frequencies, mean, standard deviation, minimum and maximum values, level of missing data). Variables with characteristics problematic for correlational analyses (e.g., restricted range) were further refined or eliminated from further analyses.

The selection of dependent and independent variables for multivariate analyses involved an iterative matching of available data (original ESIS variables and derived variables) with key concepts and topics pertinent to the evaluation. For example, from many data elements available concerning participant characteristics, a few variables expected to be relevant to program participation were selected (e.g., parent educational background and English proficiency). From data on project characteristics, we selected those that represented key program elements (e.g., service intensity, integration across service areas, flexibility of services) and those representing projects' organizational capacities (e.g., funding, staff, number of families served). The goal of this step was to identify all variables relevant to evaluation questions and, at the same time, to minimize redundancies among variables. The variable selection step also involved running rounds of regression analyses to identify and eliminate variables that consistently contributed minimally to multiple correlations.

Several multiple regression approaches were considered for analyzing the relationships between a wide variety of participant characteristics, project characteristics, and service delivery practices on one hand and families' participation patterns on the other. We performed exploratory analyses to select the approach that was appropriate for the type of data being analyzed and facilitated interpretation and reporting.

In the case of dichotomously coded dependent variables (e.g., items coded as yes or no), we tested three different regression methods: simple regression, probit model, and logit model. Given that all analyses produced similar results in terms of overall model fit and parameter estimates for individual independent variables, we reported the simple regression results for ease of interpretation (see Gruber and Madrian, 1997; Munnell et al., 1996).

The regression results reported in Chapters 5 and 6 are based on a stepwise regression model. The regression analyses were used to refine the selection of variables that most strongly "influence" a dependent variable. Once an independent variable (e.g., parent educational background) was thus identified, we grouped participants by different levels of that independent variable (e.g., 6th grade or less, 7th to 9th grades, etc.) and examined differences between the means of the dependent variable across these groups, generally by using the analysis of variance (ANOVA) method.

In the ANOVAs, we simply asked: how did families having different levels of the independent variable differ on a specific measure of participation? We did not partial out the potential influence of other variables entered in the regression analysis on the dependent variable for ease of interpretation. Instead, we examined interaction effects of two or more independent variables found to be related to the dependent variable in the regression analyses.

Exhibit C.1 presents the variables included in the regression analyses reported in Chapters 5 and 6 and their distributional characteristics. Not all variables listed were in every regression analysis; some variables were used as dependent variables in Chapter 5 analyses and as independent variables in Chapter 6 analyses. Exhibit C.2 presents bivariate, simple correlations among variables used in regression analyses at the adult participant level. In analyses at the family and child participant levels, the magnitude of correlations among variables was similar (generally very low) to those shown in Exhibit C.2.

Exhibit C.1: Variables Used in Chapters 5 and 6 Multiple Regression Analyses

Variable	Variable Name	Minimum-Maximum Values	Mean	SD
PARTICIPATION MEASURES				
Number of instructional home visits in which family participated	HOMEVIST	0-159	7.15	9.51
Hours/year of adult education participation	AE_PRTHR	0-1988	96.22	158.41
Hours/year of parenting education participation	PE_PRTHR	0-982	27.66	41.98
Child (did, did not) participate in ECE for 10-12 months	ECE10_12	Dichotomous 1, 0	0.22	0.42
Family (did, did not) participate in all core services	ALL_CORE	Dichotomous 1, 0	0.93	0.26
Family was continuing at year-end	RETAINED	Dichotomous 1, 0	0.56	0.50
Family completed goals and left the program	COMPLETD	Dichotomous 1, 0	0.15	0.36
FAMILY CHARACTERISTICS				
Age of parent	ADULTAGE	14-91	28.49	8.57
New vs. continuing family	NEW97	Dichotomous 1, 0	0.60	0.49
Highest grade reached by parent prior to enrollment in Even Start	EDUCATION	0-16	9.55	3.04
Parent with limited English proficiency	LEP	Dichotomous 1, 0	0.33	0.47
Family with 4 or more Need Indices	NEEDY	Dichotomous 1, 0	0.43	0.19
Number of support services family received during the year	SUPPORT	0-9	2.89	2.06
Single-parent vs. non-single-parent family	ONEPAR	Dichotomous 1, 0	0.36	0.48
PROJECT CHARACTERISTICS				
Rural vs. non-rural community/service area	RURAL	Dichotomous 1, 0	0.50	0.50
Total project funds in 1996-97 (in thousand dollars)	TOT_FUNDS	23-943	285.72	153.13
Project age	PROJAGE	1-8	4.59	1.99
Number of families served in 1996-97	PROJSIZE	0-400	55.81	44.67
Extent of interagency collaboration	COLABSUM	0-9	4.65	2.74
Barriers experienced by project in program implementation	BARRIERS	2-85	30.36	12.51

(Exhibit continues on the next page.)

BEST COPY AVAILABLE

Exhibit C.1: Variables Used in Chapters 5 and 6 Multiple Regression Analyses (Continued)

Variable	Variable Name	Minimum-Maximum Values	Mean	SD
STAFF RESOURCES AND QUALIFICATIONS				
Number of Even Start paid staff	NO_STAFF	0-61	10.26	7.26
Proportion of instructors with college or higher education	INS_HIED	0-1	0.75	0.35
Proportion of instructors with five or more years of experience	INS_HIEX	0-1	0.50	0.38
Days/year of inservice training per staff	AVGDAYS	0.5-11	6.93	2.77
SERVICE INTENSITY AND DELIVERY PRACTICES				
Adult education hours offered per month	AE_HRMO	0-160	30.62	23.75
Parenting education hours offered per month	PE_HRMO	0-128	18.75	17.13
Early childhood education hours offered per month	ECE_HRMO	0-160	42.72	33.41
Ratio of home-based instruction hours offered to total hours offered	HB_RATIO	0-1	0.21	0.24
Individually-tailored vs. standardized instruction	INDIV	1-5	2.18	0.70
Group activities vs. learners working alone	GROUP	1-5	2.80	0.62
Learner- vs. instructor-selected instruction	LEARNER	1-5	3.26	0.72
Extent of functional literacy incorporated into adult education curriculum	FUNCLIT	1-3	2.23	0.43
Extent of parenting education activities (variety and proportion of families affected)	COMP_PE	11-60	55.79	5.15
Extent of integration of services across core service areas	INT_ALL	2-4	2.78	0.47
Transitional services offered to children	TRANSERV	0-12	5.61	3.33
Flexibility of service delivery schedule	FLEXSERV	0-3	2.17	0.81

Exhibit C.2: Correlations Among the Variables Used in Regression Analyses at the Adult Participant Level

Variable Name	AE_PRTHR	PE_PRTHR	EDUCATION	ADULT-AGE	NEW97	LEP	NEEDY	SUPPORT	ONEPAR	RURAL	TOT-FUNDS	PROJ-SIZE	PROJ-AGE	NO-STAFF	INS_HIED
N	**32,464**	**32,963**	**35,483**	**38,037**	**39,423**	**35,909**	**37,960**	**34,025**	**38,643**	**39,443**	**38,476**	**37,626**	**37,665**	**39,640**	**39,640**
AE_PRTHR	1	0.44	-0.03	-0.05	-0.02	0.03	0.02	0.22	0.04	-0.08	0.03	-0.01	0.05	-0.06	0.01
PE_PRTHR	0.44	1	0.01	0.01	-0.06	0.01	0.02	0.25	0	-0.01	0.05	-0.04	0.04	-0.03	0.06
EDUCATION	-0.03	0.01	1	-0.1	0.03	-0.37	-0.35	-0.09	0.06	0.03	0.01	-0.02	-0.02	0.02	0.07
ADULTAGE	-0.05	0.01	-0.1	1	-0.14	0.26	0.11	-0.09	-0.14	-0.02	0.03	0.02	0.04	0.05	-0.03
NEW97	-0.02	-0.06	0.03	-0.14	1	-0.05	-0.1	0.04	0.06	-0.06	-0.06	-0.01	-0.13	0.02	0.08
LEP	0.03	0.01	-0.37	0.26	-0.05	1	0.23	0.04	-0.24	-0.13	0.06	0.04	0.05	0.1	-0.08
NEEDY	0.02	0.02	-0.35	0.11	-0.1	0.23	1	0.09	0.29	-0.04	-0.01	0	-0.02	-0.02	-0.02
SUPPORT	0.22	0.25	-0.09	-0.09	0.04	0.04	0.09	1	0.07	-0.02	0.01	-0.07	-0.05	-0.07	0.02
ONEPAR	0.04	0	0.06	-0.14	0.06	-0.24	0.29	0.07	1	-0.1	-0.02	0	-0.02	-0.08	0.03
RURAL	-0.08	-0.01	0.03	-0.02	-0.06	-0.13	-0.04	-0.02	-0.1	1	-0.14	-0.23	-0.14	-0.09	0.02
TOT_FUNDS	0.03	0.05	0.01	0.03	-0.06	0.06	-0.01	0.01	-0.02	-0.14	1	0.22	0.33	0.25	0.07
PROJSIZE	-0.01	-0.04	-0.02	0.02	-0.01	0.04	0	-0.07	0	-0.23	0.22	1	0.27	0.38	0
PROJAGE	0.05	0.04	-0.02	0.04	-0.13	0.05	-0.02	-0.05	-0.02	-0.14	0.33	0.27	1	0.1	-0.08
NO_STAFF	-0.06	-0.03	0.02	0.05	0.02	0.1	-0.02	-0.07	-0.08	-0.09	0.25	0.38	0.1	1	0.11
INS_HIED	0.01	0.06	0.07	-0.03	0.08	-0.08	-0.02	0.02	0.03	0.02	0.07	0	-0.08	0.11	1
INS_HIEX	0.01	0	0.01	0.01	-0.04	-0.05	0	0	0.03	0	0.09	0.02	0.04	0.03	0.31
HB_RATIO	-0.12	-0.14	0.05	0	-0.1	-0.09	-0.04	-0.11	-0.06	0.25	-0.01	0.03	0.05	-0.01	-0.1
AE_HRMO	0.19	0.08	-0.04	-0.07	0.04	-0.02	0.04	0.07	0.1	-0.08	0.04	-0.02	0.13	-0.06	0.01
PE_HRMO	0.07	0.19	-0.03	-0.03	0.01	0	0.06	0.08	0.07	-0.07	0.04	-0.02	0.05	-0.08	-0.02
INDIV	0.05	0.04	-0.05	0.06	0	0.15	0.04	-0.07	-0.01	-0.05	-0.01	0.08	0.01	0.03	-0.04
GROUP	-0.06	-0.02	0.08	-0.07	-0.05	-0.19	-0.05	0	0.02	0.09	0.04	0.02	0.09	0.05	-0.08
LEARNER	0	0.02	-0.05	0.02	0	0.15	0.07	-0.05	0.02	-0.08	-0.09	-0.06	0.01	0	-0.03
FUNCLIT	0.04	0.07	-0.01	-0.02	0	0	0	0.08	0	-0.06	0.17	0.08	0.05	0.02	0.04
COMPPE	0.06	0.1	-0.01	0.02	-0.07	0.02	-0.01	0.03	-0.03	-0.04	0.18	-0.01	0.11	0.04	-0.08
INT_ALL	0.04	0.1	-0.01	-0.01	0.03	0.03	0	0.04	-0.02	-0.02	0.09	-0.02	-0.03	-0.01	0.08
FLEXSERV	-0.04	-0.03	-0.01	0.02	-0.12	0.03	-0.01	-0.02	-0.08	0.13	0.13	0.15	0.08	0.14	-0.1
COLABSUM	0.04	-0.05	-0.01	-0.01	-0.06	-0.04	-0.02	0.01	-0.02	0.03	0.1	0.11	0.15	-0.03	-0.14
BARRIERS	-0.04	-0.03	0.05	-0.03	0.06	-0.11	-0.02	-0.01	0.03	0.02	-0.11	0.08	-0.08	-0.08	0.06
TRANSERV	0.04	0.05	0.02	0.05	-0.06	0	-0.02	0.05	-0.02	0.07	0.19	-0.07	0.09	-0.03	0.06
AVGDAYS	0.04	0.04	-0.04	0.05	-0.09	0.04	0.04	0	-0.03	-0.06	0.12	0.27	0.07	-0.03	-0.09

(Exhibit continues on the next page.)

Exhibit C.2: Correlations Among the Variables Used in Regression Analyses at the Adult Participant Level (Continued)

Variable Name	HB_RATIO	AE_HRMO	PE_HRMO	INDIV	GROUP	LEARNER	FUNCLIT	COMPPE	INT_ALL	FLEXSERV	COLABSUM	BARRIERS	TRANSERV
N	36,859	37,742	37,818	37,657	37,606	37,676	37,272	37,884	37,676	38,013	38,013	38,997	39,643
AE_PRTHR	-0.12	0.19	0.07	0.05	-0.06	0	0.04	0.06	0.04	-0.04	0.04	-0.04	0.04
PE_PRTHR	-0.14	0.08	0.19	0.04	-0.02	0.02	0.07	0.1	0.1	-0.03	-0.05	-0.03	0.05
EDUCATION	0.05	-0.04	-0.03	-0.05	0.08	-0.05	-0.01	-0.01	-0.01	-0.01	-0.01	0.05	0.02
ADULTAGE	0	-0.07	-0.03	0.06	-0.07	0.02	-0.02	0.02	-0.01	0.02	-0.01	-0.03	0.05
NEW97	-0.1	0.04	0.01	0	-0.05	0	0	-0.07	0.03	-0.12	-0.06	0.06	-0.06
LEP	-0.09	-0.02	0	0.15	-0.19	0.15	0	0.02	0.03	0.03	-0.04	-0.11	0
NEEDY	-0.04	0.04	0.06	0.04	-0.05	0.07	0	-0.01	0	-0.01	-0.02	-0.02	-0.02
SUPPORT	-0.11	0.07	0.08	-0.07	0	-0.05	0.08	0.03	0.04	-0.02	0.01	-0.01	0.05
ONEPAR	-0.06	0.1	0.07	-0.01	0.02	0.02	0	-0.03	-0.02	-0.08	-0.02	0.03	-0.02
RURAL	0.25	-0.08	-0.07	-0.05	0.09	-0.08	-0.06	-0.04	-0.02	0.13	0.03	0.02	0.07
TOT_FUNDS	-0.01	0.04	0.04	-0.01	0.04	-0.09	0.17	0.18	0.09	0.13	0.1	-0.11	0.19
PROJSIZE	0.03	-0.02	-0.02	0.08	0.02	-0.06	0.08	-0.01	-0.02	0.15	0.11	0.08	-0.07
PROJAGE	0.05	0.13	0.05	0.01	0.09	0.01	0.05	0.11	-0.03	0.08	0.15	-0.08	0.09
NO_STAFF	-0.01	-0.06	-0.08	0.03	0.05	0	0.02	0.04	-0.01	0.14	-0.03	-0.08	-0.03
INS_HIED	-0.1	0.01	-0.02	-0.04	-0.08	-0.03	0.04	-0.08	0.08	-0.1	-0.14	0.06	0.06
INS_HIEX	0.04	-0.02	-0.02	0.03	0.02	-0.07	0.13	0.06	0.04	-0.06	-0.04	-0.08	0.12
HB_RATIO	1	-0.34	-0.27	-0.18	0.29	-0.06	-0.04	-0.01	0.01	0.24	0.09	-0.07	0.09
AE_HRMO	-0.34	1	0.27	0.03	0	0.05	-0.01	0.05	0.01	-0.1	0.17	-0.01	-0.06
PE_HRMO	-0.27	0.27	1	0.16	-0.02	0.11	0.05	0.11	0.16	-0.08	-0.03	-0.01	-0.04
INDIV	-0.18	0.03	0.16	1	-0.2	0.31	0.01	-0.12	-0.1	-0.05	0.02	0.05	-0.05
GROUP	0.29	0	-0.02	-0.2	1	-0.02	-0.03	0.09	0.01	0.06	0.05	0.03	0.07
LEARNER	-0.06	0.05	0.11	0.31	-0.02	1	-0.08	-0.04	-0.07	-0.12	-0.11	-0.14	-0.1
FUNCLIT	-0.04	-0.01	0.05	0.01	-0.03	-0.08	1	0.11	0.07	0	-0.02	0.03	0.13
COMPPE	-0.01	0.05	0.11	-0.12	0.09	-0.04	0.11	1	0.18	0.16	0.09	-0.23	0.19
INT_ALL	0.01	0.01	0.16	-0.1	0.01	-0.07	0.07	0.18	1	0.06	-0.22	-0.1	0.05
FLEXSERV	0.24	-0.1	-0.08	-0.05	0.06	-0.12	0	0.16	0.06	1	0.22	-0.04	0.19
COLABSUM	0.09	0.17	-0.03	0.02	0.05	-0.11	-0.02	0.09	-0.22	0.22	1	0.06	0
BARRIERS	-0.07	-0.01	-0.01	0.05	0.03	-0.14	0.03	-0.23	-0.1	-0.04	0.06	1	-0.05
TRANSERV	0.09	-0.06	-0.04	-0.05	0.07	-0.1	0.13	0.19	0.05	0.19	0	-0.05	1
AVGDAYS	0.17	-0.02	0.06	0	0.13	0.02	0.02	0.15	0.13	0.19	0.12	-0.02	0.1

BEST COPY AVAILABLE

RATIONALE

The rationale for the Even Start program rests upon general postulates or expectations that regular participation in family-focused educational services of sufficient intensity and quality will promote improvement of literacy and basic skills of parents; general development and school readiness of children; and self-sufficiency of the family as a whole. The Even Start statute reflects these expectations by specifying many aspects of the program to be implemented: regular, sufficiently intense educational services, support services, home-based instructions, parent-child activities, accommodation to parents' schedules, staff development, local evaluation, interagency collaboration, and integration across three core service areas.

A key mandate for the national evaluation is to investigate whether and to what extent these factors are related to program outcomes. The second national evaluation did not collect measures of program outcomes, except for new families in the Sample Study projects. However, we focused on families' participation patterns as intervening "outcome" measures. The logic behind this strategy was simple: without sufficient levels of participation, Even Start services cannot directly influence educational outcomes of families. In addition to the expectation that different levels and approaches of service delivery may influence the participation measures, there is also a need to know whether the extent of their influence may be moderated by a host of participant characteristics (e.g., participant age, educational background, English proficiency, level of family need) and project characteristics (e.g., program budget, size of project, number of staff, staff qualifications, community setting).

Currently there is insufficient knowledge to formulate specific hypotheses about the potential influence of all these participant, project, and service delivery characteristics on participation patterns. Based on the general assumptions about the Even Start approach, one may construct a regression model that tests a specific hypothesis about characteristics of educational services and the level of *educational outcomes*. But, the dynamics of factors that influence *participation patterns*, as opposed to program outcomes, are less known. *Therefore, the multiple regression analyses reported in Chapters 5 and 6 are descriptive and exploratory.*

We chose to enter variables that represent many of the factors expected to be relevant to families' participation patterns and/or factors that may moderate the relationships between key input factors and participation behaviors. Factors such as parents' pre-Even Start educational attainment, English language proficiency, indicators of family need, or project staff professional qualifications may be considered as moderating variables. On the other hand, some factors (e.g., extent of staff training, home-based versus center-based services, and integration across core service areas) could be viewed as explanatory/causal or moderating factors depending on the version of the Even Start model one holds. The analyses reported in Chapters 5 and 6 left this type of specification open. We simply report the extent of relationship between any of the independent variables with the dependent variable *controlling for the effects of all other variables.*

In addition to the scarcity of knowledge about factors that affect participation, our analysis design reflects the nature of the available data. The Even Start national evaluation data may be described as "a mile wide and an inch deep." The data cover many aspects of participants, program organizational contexts, implementation approaches, educational contents and intensity, participation patterns, a few progress indicators, and sample-based educational outcome data. In the interest of capturing at least some information about many aspects of the program and at the same time minimizing local projects' data collection burden, no one issue or topic was measured in depth in this evaluation.

Thus, the primary goal of the regression analysis reported in Chapters 5 and 6 is a description of the relationship of each independent variable with a dependent variable holding constant the potential effects of all other variables entered in the analysis. The goal is not prediction of participation levels based on specific participant or project characteristics, or revelation of theoretical relationships among a large array of measures pertinent to Even Start. The descriptive information is intended to support a more focused analysis of variables that reveal relatively strong relationships (primarily by using analysis of variance).

Analytical options available in regression analysis offer many ways to investigate relationships among a set of variables, for example, by combining and recombining independent variables in different sets, creating aggregate variables, transforming the values of independent variables, using many different statistical methods to accommodate different characteristics of data (simple regression, probit, logit, etc.), changing the order in which independent variables are entered in the analyses, etc. Sensible restraint over the analytical activities is needed to avoid losing sight of the primary goal for the analysis and the practical constraints of available time and resources.

Potential problems associated with regression are: (1) multicollinearity (high correlations among independent variables); (2) statistically significant results for individual independent variables by chance from using many independent variables and running many tests; and (3) erroneously raising the R^2 (total variance of the dependent variable explained by the multiple regression) purely due to a large number of independent variables.

For the regressions reported in Chapters 5 and 6, multicollinearity is not a problem. The simple, bivariate correlations between any two variables (used as dependent or independent variables in these analyses) are generally very low (Exhibit C.2). The low correlations also did not support combining variables into sets or higher-order measures through factor or cluster analyses.

The risk of finding significant results by chance is minimized in these analyses given the large number of records which essentially constitute the universe of Even Start families, parents, and children. In fact, the large N tends to make even a fairly small regression coefficient statistically significant. However, from each regression analysis, we selected only a few (generally three to five) independent variables that produced the strongest relationships for further, more focused analyses.

The possibility of making erroneous conclusions due to artificially inflated R^2s is minimal in our analyses. First, the adjusted ("shrunken") R^2s generated by SAS to statistically correct for this problem were essentially the same as the unadjusted R^2s, especially for the participant-level analyses based on large Ns. A more important protection against the problem of artificially inflated R^2s rests in how we used the regression results. The obtained R^2s were relatively low; one (for the number of home visits) reached .22, but many were around .10 or lower. A claim can be made that these R^2s are ***not too low*** to be useful for analyses based on cross-sectional (versus longitudinal) individual-based data. Nevertheless, these R^2s leave most of the variation in the dependent variables unexplained. Thus, we did not stress the explanatory importance of any independent variable or collection of independent variables solely based upon these regression analyses. Even if they had been artificially inflated, the R^2s still left much unexplained.

Instead, we used the regression analyses to identify variables that appear to have stronger relationships with the dependent variables compared to other independent variables. We followed up the regression findings with further, more focused analyses of those variables, primarily based on analysis of variance (ANOVA) techniques.

The generally low simple correlations provide perhaps the most reliable conclusion one can derive from all *regression analyses* conducted for Chapters 5 and 6. The data available can explain only a small portion of variation in these dependent variables (generally about 10 percent).

The remainder of this appendix presents the final summary statistics of stepwise regressions on the following service intensity measures discussed in Chapter 5 and participation measures discussed in Chapter 6:

- Hours per month of adult education offered;
- Hours per month of parenting education offered;
- Hours per month of early childhood education offered;
- Number of instructional home visits;
- Hours of adult education participation;
- Hours of parenting education participation;
- Whether or not a child participated for 10-12 months of the program year; and
- Whether or not a family participated in all three core services.

REGRESSION ANALYSIS RESULT SUMMARY TABLES

Exhibit C.3: Summary of Regression Analysis on Hours per Month of Adult Education *Offered* (1996-97)

Dependent Variable: Average Hours of Adult Education Services Offered per Month -						
Degrees of Freedom (DF):			Model: 7	Error: 567	Total: 574	
R-square:		0.16			F Value:	15.389
Adjusted R-square:		0.149			Prob>F:	0.0001
Dependent Mean:		31.331			C.V.:	65.96
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	26.181397	3.62360436	7.225	0.0001	0
PROJAGE	1	1.184591	0.49865064	2.376	0.0179	0.1000485
HB_RATIO	1	-32.068709	3.73250815	-8.592	0.0001	-0.33426902
TOT_FUNDS	1	1.7121E-05	0.00000709	2.416	0.016	0.10553643
NO_STAFF	1	-0.373452	0.12244257	-3.05	0.0024	-0.12556375
LEPPCT	1	-5.967398	3.29761078	-1.81	0.0709	-0.08437984
TEENPCT	1	15.250471	6.4102832	2.379	0.0177	0.10106055
NEEDYPCT	1	12.26329	5.02160675	2.442	0.0149	0.10454239

Exhibit C.4: Summary of Regression Analysis on Hours per Month of Parenting Education *Offered* (1996-97)

Dependent Variable: Average Hours of Parenting Education Services Offered per Month						
Degrees of Freedom (DF):			Model: 4	Error: 571	Total: 575	
R-square:		0.106			F Value:	16.837
Adjusted R-square:		0.099			Prob>F:	0.0001
Dependent Mean:		18.946			C.V.:	79.95
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	17.14315	1.967407	8.714	0.0001	0
HB_RATIO	1	-19.3218	2.72257	-7.097	0.0001	-0.28260611
TOT_FUNDS	1	8.26E-06	4.63E-06	1.781	0.0754	0.07137506
LEPPCT	1	-6.02247	2.22088	-2.712	0.0069	-0.11955141
NEEDYPCT	1	12.55091	3.649519	3.439	0.0006	0.15014061

Exhibit C.5: Summary of Regression Analysis on Hours per Month of Early Childhood Education *Offered* (1996-97)

Dependent Variable: Average Hours of Early Childhood Education Services Offered per Month						
Degrees of Freedom (DF):			Model: 6	Error: 567	Total: 573	
R-square:		0.142			F Value:	15.618
Adjusted R-square:		0.133			Prob>F:	0.0001
Dependent Mean:		43.446			C.V.:	70.261
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	50.28239	4.476804	11.232	0.0001	0
HB_RATIO	1	-43.8913	5.519702	-7.952	0.0001	-0.31256515
TOT_FUNDS	1	3.73E-05	9.75E-06	3.829	0.0001	0.15733894
NO_STAFF	1	-0.73825	0.18115	-4.075	0.0001	-0.1697872
INS_HIEX	1	-5.77384	3.435713	-1.681	0.0934	-0.06577608
LEPPCT	1	-9.01222	4.552846	-1.979	0.0482	-0.08713121
NEEDYPCT	1	14.3033	7.437787	1.923	0.055	0.0833524

Exhibit C.6: Summary of Regression Analysis on Number of Instructional Home Visits Families Received (1996-97)

Dependent Variable: Number of Instructional Home Visits						
Degrees of Freedom (DF):			Model: 26	Error: 22,365	Total: 22,391	
R-square:		0.213			F Value:	233.194
Adjusted R-square:		0.212			Prob>F:	0.0001
Dependent Mean:		7.141			C.V.:	115.13
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	-2.329777	1.02027197	-2.283	0.0224	0
EDUCATION	1	0.193762	0.02141111	9.05	0.0001	0.05931504
ADULTAGE	1	0.048888	0.0072896	6.707	0.0001	0.04160736
NEW97	1	-2.387952	0.11823778	-20.196	0.0001	-0.1241255
NEEDY	1	0.511888	0.13131727	3.898	0.0001	0.02727742
SUPPORT	1	0.896536	0.02866463	31.277	0.0001	0.19372418
ONEPAR	1	-0.291876	0.12726209	-2.294	0.0218	-0.01518887
RURAL	1	0.688616	0.12341379	5.58	0.0001	0.03681258
TOT_FUNDS	1	-0.001714	0.00040084	-4.276	0.0001	-0.02923286
PROJSIZE	1	-0.021529	0.00109035	-19.746	0.0001	-0.14680422
PROJAGE	1	0.483174	0.03308899	14.602	0.0001	0.10106494
NO_STAFF	1	0.065587	0.00702027	9.343	0.0001	0.06655349
INS_HIED	1	-1.013601	0.16504126	-6.142	0.0001	-0.03797628
HB_RATIO	1	10.711215	0.29595236	36.192	0.0001	0.27299996
AE_HRMO	1	-0.020312	0.00277542	-7.319	0.0001	-0.04989881
PE_HRMO	1	-0.011567	0.00366316	-3.158	0.0016	-0.0207369
ECE_HRMO	1	0.01319	0.00188296	7.005	0.0001	0.04752089
INDIV	1	0.285798	0.08668741	3.297	0.001	0.02171957
GROUP	1	0.464073	0.0990047	4.687	0.0001	0.03088936
LEARNER	1	0.401047	0.08862188	4.525	0.0001	0.02910537
FUNCLIT	1	-0.484914	0.13058474	-3.713	0.0002	-0.02276465
COMPPE	1	-0.058552	0.01360968	-4.302	0.0001	-0.02856723
INT_ALL	1	-0.403342	0.12696845	-3.177	0.0015	-0.02001085
FLEXSERV	1	1.58805	0.07846556	20.239	0.0001	0.13495759
BARRIERS	1	0.020294	0.00472617	4.294	0.0001	0.02731864
TRANSERV	1	-0.071811	0.01787176	-4.018	0.0001	-0.02585
AVGDAYS	1	0.120123	0.02302791	5.216	0.0001	0.03542287

BEST COPY AVAILABLE

Exhibit C.7: Summary of Regression Analysis on Hours per Year of Participation in Adult Education (1996-97)

Dependent Variable: Hours of Participation in Adult Education						
Degrees of Freedom (DF):			Model: 22	Error: 24,333	Total: 24,335	
R-square:		0.099			F Value:	121.902
Adjusted R-square:		0.099			Prob>F:	0.0001
Dependent Mean:		100.663			C.V.:	154.431
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	37.641894	17.6010498	2.139	0.0325	0
ADULTAGE	1	-0.810881	0.1326148	-6.115	0.0001	-0.0396012
NEW97	1	-16.560207	2.11378294	-7.834	0.0001	-0.04931845
LEP	1	6.986343	2.5443161	2.746	0.006	0.01970636
NEEDY	1	-4.418901	2.26933949	-1.947	0.0515	-0.0133278
SUPPORT	1	15.464135	0.50871244	30.399	0.0001	0.19091372
ONEPAR	1	5.061536	2.42085445	2.091	0.0366	0.01465476
RURAL	1	-23.612647	2.18506644	-10.806	0.0001	-0.07154828
TOT_FUNDS	1	-0.017623	0.00740539	-2.38	0.0173	-0.01688785
PROJAGE	1	1.25935	0.5850515	2.153	0.0314	0.01467058
NO_STAFF	1	-0.408314	0.11433424	-3.571	0.0004	-0.02387995
INS_HIED	1	7.461816	2.97355702	2.509	0.0121	0.01602641
AE_HRMO	1	1.186461	0.0464955	25.518	0.0001	0.16292082
INDIV	1	9.336664	1.55659128	5.998	0.0001	0.04028414
GROUP	1	-12.584787	1.78668607	-7.044	0.0001	-0.04653098
LEARNER	1	-6.966314	1.60189334	-4.349	0.0001	-0.02885022
COMPPE	1	0.591528	0.23870733	2.478	0.0132	0.01653535
INT_ALL	1	8.722573	2.31236428	3.772	0.0002	0.02433834
FLEXSERV	1	-8.968074	1.42141283	-6.309	0.0001	-0.0427621
COLABSUM	1	1.226093	0.40525701	3.025	0.0025	0.02036499

Exhibit C.8: Summary of Regression Analysis on Hours per Year of Participation in Parenting Education (1996-97)

Dependent Variable: Hours of Participation in Parenting Education						
Degrees of Freedom (DF):			Model: 20	Error: 24,734	Total: 24,754	
R-square:		0.134			F Value:	191.21
Adjusted R-square:		0.133			Prob>F:	0.0001
Dependent Mean:		28.102			C.V.:	137.432
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	-39.330113	4.032435	-9.753	0.0001	0
EDUCATION	1	0.634129	0.084665	7.49	0.0001	0.0452681
ADULTAGE	1	0.125887	0.031463	4.001	0.0001	0.02433489
NEW97	1	-6.304275	0.520917	-12.102	0.0001	-0.07401192
SUPPORT	1	5.031517	0.125665	40.039	0.0001	0.24521387
ONEPAR	1	-2.625165	0.531649	-4.938	0.0001	-0.02999677
RURAL	1	-1.914206	0.547636	-3.495	0.0005	-0.02290935
PROJSIZE	1	-0.031714	0.004727	-6.709	0.0001	-0.04911828
PROJAGE	1	1.116064	0.139119	8.022	0.0001	0.05187513
NO_STAFF	1	-0.078402	0.02936	-2.67	0.0076	-0.01815144
INS_HIED	1	5.637551	0.767762	7.343	0.0001	0.04765011
INS_HIEX	1	-1.79838	0.706072	-2.547	0.0109	-0.01606152
HB_RATIO	1	-9.68601	1.213254	-7.983	0.0001	-0.0549032
PE_HRMO	1	0.360938	0.016352	22.073	0.0001	0.14327393
INDIV	1	2.763523	0.365145	7.568	0.0001	0.04697883
COMPPE	1	0.442791	0.058298	7.595	0.0001	0.04899382
INT_ALL	1	4.288654	0.578363	7.415	0.0001	0.04751647
FLEXSERV	1	-1.141808	0.349956	-3.263	0.0011	-0.02154088
COLABSUM	1	-0.452797	0.097436	-4.647	0.0001	-0.02958847
BARRIERS	1	-0.086626	0.020969	-4.131	0.0001	-0.02587645
AVGDAYS	1	0.463317	0.101095	4.583	0.0001	0.03055472

Exhibit C.9: Summary of Regression Analysis on Children Participating in Early Childhood Education for 10-12 Months (1996-97)

Dependent Variable: Children Participating in Early Childhood Education for 10-12 Months						
Degrees of Freedom (DF):			Model: 25	Error: 30,058	Total: 30,083	
R-square:		0.119			F Value:	162.859
Adjusted R-square:		0.119			Prob>F:	0.0001
Dependent Mean:		0.228			C.V.:	172.975
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	0.024811	0.039484	0.628	0.5298	0
EDUCATION	1	0.002831	0.000862	3.285	0.001	0.01973082
ADULTAGE	1	0.002254	0.000338	6.666	0.0001	0.03995816
CHILDAGE	1	0.009388	0.001078	8.711	0.0001	0.05261516
NEW97	1	-0.186822	0.004904	-38.097	0.0001	-0.21635832
NEEDY	1	0.021015	0.005419	3.878	0.0001	0.02496757
SUPPORT	1	0.013145	0.001198	10.971	0.0001	0.06239961
ONEPAR	1	-0.037098	0.005283	-7.021	0.0001	-0.042667
RURAL	1	0.016285	0.00513	3.174	0.0015	0.01922199
TOT_FUNDS	1	-4.381E-05	1.68E-05	-2.611	0.009	-0.0162009
PROJSIZE	1	-0.000485	4.56E-05	-10.645	0.0001	-0.07350411
PROJAGE	1	0.010691	0.001389	7.695	0.0001	0.04844371
NO_STAFF	1	0.003685	0.000291	12.647	0.0001	0.0827305
INS_HIED	1	-0.025599	0.007086	-3.613	0.0003	-0.02157697
INS_HIEX	1	0.02914	0.006528	4.464	0.0001	0.02594075
HB_RATIO	1	0.147223	0.011982	12.287	0.0001	0.08277229
ECE_HRMO	1	0.000906	7.75E-05	11.7	0.0001	0.07203625
INDIV	1	0.007165	0.003422	2.094	0.0363	0.01197066
GROUP	1	-0.007171	0.00401	-1.788	0.0737	-0.01054737
COMPPE	1	-0.003013	0.000554	-5.442	0.0001	-0.0325963
INT_ALL	1	0.026654	0.005286	5.042	0.0001	0.02907665
FLEXSERV	1	0.010738	0.003279	3.275	0.0011	0.01983446
COLABSUM	1	0.005578	0.000936	5.962	0.0001	0.03619494
BARRIERS	1	-0.001281	0.000194	-6.604	0.0001	-0.0380889
TRANSERV	1	0.008279	0.000752	11.004	0.0001	0.06445146
AVGDAYS	1	0.009896	0.000935	10.584	0.0001	0.06511513

Exhibit C.10: Summary of Regression Analysis on Families Participating in All Three Core Services (1996-97)

Dependent Variable: Number of Families Participating in All Core Services						
Degrees of Freedom (DF):			Model: 21	Error: 20,342	Total: 20,363	
R-square:		0.116			F Value:	127.428
Adjusted R-square:		0.115			Prob>F:	0.0001
Dependent Mean:		0.931			C.V.:	25.576
		Parameter	Standard	T for H0:		Standardized
Variable	DF	Estimate	Error	Parameter=0	Prob > |T|	Estimate
INTERCEPT	1	0.77307	0.024253	31.875	0.0001	0
EDUCATION	1	-0.003965	0.000834	-4.755	0.0001	-0.03205651
ADULTAGE	1	-0.001084	0.000306	-3.543	0.0004	-0.02390685
NEW97	1	0.051602	0.004789	10.775	0.0001	0.07012343
LEP	1	0.011497	0.005816	1.977	0.0481	0.01484398
SUPPORT	1	0.05055	0.001162	43.505	0.0001	0.28259486
ONEPAR	1	-0.018147	0.00493	-3.681	0.0002	-0.02450861
RURAL	1	-0.027894	0.005	-5.579	0.0001	-0.0386817
PROJSIZE	1	-0.000149	4.09E-05	-3.649	0.0003	-0.02693021
PROJAGE	1	0.013209	0.001304	10.126	0.0001	0.07112614
INS_HIEX	1	0.010985	0.006231	1.763	0.0779	0.01136152
AE_HRMO	1	-0.001359	0.00011	-12.326	0.0001	-0.08661738
ECE_HRMO	1	0.000957	7.56E-05	12.653	0.0001	0.08933499
GROUP	1	0.02123	0.003917	5.42	0.0001	0.03634833
LEARNER	1	-0.009821	0.003429	-2.864	0.0042	-0.0188295
FLEXSERV	1	-0.03486	0.003151	-11.064	0.0001	-0.0767022
COLABSUM	1	-0.001749	0.000887	-1.972	0.0486	-0.01337085
BARRIERS	1	0.000703	0.000188	3.743	0.0002	0.02467893
TRANSERV	1	-0.002952	0.000722	-4.088	0.0001	-0.02744816
AVGDAYS	1	-0.003416	0.000895	-3.819	0.0001	-0.02625958

APPENDIX D: ADDITIONAL INFORMATION ABOUT THE SAMPLE STUDY

CONTENT VALIDITY OF MEASURES USED IN THE SAMPLE STUDY

Each of the measures used in the Sample Study has demonstrated reasonable content validity. The 32-item Preschool Inventory (PSI), for example, was developed in order to reflect exposure to instruction and assess children's readiness for schooling. The PSI "exhibits moderate to strong relationships with other measures of cognitive ability," including the Illinois Test of Psycholinguistic Abilities, the Denver Developmental Screening Test, the Peabody Picture Vocabulary Test-Revised, and the Wide Range Achievement Test (pp. 32-33, Abt Associates, 1991).

The Preschool Language Scale-3 (PLS-3) was developed to assess young children's receptive and expressive language, as well as behaviors that may be precursors to language in very young children. The PLS-3 assesses the language skills that previous research has indicated are critical to the development of facility in language (Zimmerman, Steiner, and Pond, 1992). Studies assessing the concurrent validity of the PLS have been conducted using such language-development focused instruments as the Receptive-Expressive Emergent Language Scale, Test of Early Language Development, Peabody Picture Vocabulary Test, with composite tests that include a language development component (e.g., the Battelle Development Inventory and the Minnesota Child Development Inventory), as well as with instruments designed to assess general cognitive ability, such as the Slosson Intelligence Test, Stanford-Binet Intelligence Scale, and the Kaufman Assessment Battery for Children (K-ABC). The PLS-3 has strong correlations (generally over .60) with tests of general cognitive ability and with the composite tests and more moderate correlations with the tests of language development (generally between .40 and .80).

The Home Screening Questionnaire (HSQ) was initially developed to assess "factors within a young child's home environment ... related to the child's growth and development" (Coons, Gay, Fandal, Ker, and Frankenburg, 1981). It collects information on a sample of aspects of a child's social, emotional, and cognitive development as reflected in the home environment. The HSQ shows strong correlations with the parent measure, the HOME Inventory.

Both the Test of Adult Basic Education (TABE) and the Comprehensive Adult Student Assessment System (CASAS) are used widely in adult education settings, chiefly because they are easy-to-use standardized measures. The CASAS assesses adults' capacity to apply basic skills to functional situations encountered in everyday life. The competencies assessed by test items are reviewed regularly and revised as appropriate. The CASAS has been found appropriate for a wide range of adult learners (Rickard, Stiles, and Martois, 1989). The TABE is an academically oriented test that measures student achievement in areas such as mathematics, reading, spelling and language—areas that are intended to match the curricula commonly covered in most adult education instruction. The TABE is appropriate for higher level learners, and scores have been found to correlate with performance on the GED (CTB/McGraw-Hill, 1987).

PRETEST SCORES ON THE OUTCOME MEASURES USED FOR THE SAMPLE STUDY

Exhibit D.1: PSI Pretest Scores (Raw Scores from the Sample Study, 1994-95 and 1995-96)

Group	n	Mean	S.D.
Age at pretest			
2 yrs, 10 mos - 3 yrs, 11 mos	303	8.4	5.6
4 yrs, 0 mos - 4 yrs, 11 mos	430	14.8	6.3
5 yrs, 0 mos - 5 yrs, 11 mos	119	17.6	6.5
Over 5 yrs, 11 mos	25	19.6	7.6
Gender			
Male	473	12.07	7.4
Female	457	13.6	7.3
Race/Ethnicity			
African American	248	12.7	7.8
Asian	56	10.0	7.6
Hispanic	280	11.3	6.8
American Indian	26	16.6	5.8
Caucasian	242	14.6	7.3
Highest grade attained by target parent [108]			
Grade 0-4	35	11.0	6.2
Grade 5-8	138	12.0	6.8
Grade 9-12	502	12.8	7.5
Diploma or GED	125	13.5	7.5
Some college or college degree	90	12.8	8.3

(Exhibit continues on following page.)

---

[108] We have presented "some college" and "college degree" together because the number of Even Start parents who had had any college (at the time of enrollment) is so small. When we examined the pretest scores for the children whose parents had completed college, the average raw pretest score was 14.9, with a standard deviation of 7.4.

BEST COPY AVAILABLE

Exhibit D.1 (continued)

Group	n	Mean	S.D.
Language of test administration			
English	674	13.5	7.4
Spanish	191	10.9	6.7
English & Spanish	34	11.8	5.7
Total	**1020**	**13.0**	**7.4**

Exhibit reads: Pretest data were collected on 303 children ranging in age from 2 years, 10 months to 3 years, 11 months. The mean PSI raw score for these children was 8.4 points, with a standard deviation of 5.6 points.

Exhibit D.2: PLS-3 Pretest Scores (Total Language Scores from the Sample Study, 1994-95 and 1995-96)

Group	n	Mean	S.D.
Age at pretest			
2 yrs, 10 mos - 3 yrs, 11 mos	279	86.8	14.3
4 yrs, 0 mos - 4 yrs, 11 mos	402	83.1	15.7
5 yrs, 0 mos - 5 yrs, 11 mos	102	83.0	16.7
Over 5 yrs, 11 mos	10	83.0	24.5
Gender			
Male	481	84.0	16.2
Female	482	85.5	15.0
Race/Ethnicity			
African American	258	83.4	15.1
Asian	55	79.2	17.3
Hispanic	297	85.8	14.0
American Indian	26	81.8	21.1
Caucasian	252	86.7	16.3
Highest grade attained by target parent			
Grade 0-4	39	84.8	11.8
Grade 5-8	157	84.6	15.7
Grade 9-12	509	84.9	15.6
Diploma or GED	110	86.4	16.3
Some college or college degree	83	82.4	17.7
Language of test administration			
English	725	84.3	15.9
Spanish	219	86.5	13.9
Total	**1016**	**84.7**	**15.6**

Exhibit reads: PLS-3 total language pretest data were collected on 279 children ranging in age from 2 years, 10 months to 3 years, 11 months. The mean PLS total language score for these children was 86.8 points, with a standard deviation of 14.3 points.

BEST COPY AVAILABLE

Exhibit D.2a, Part 1: Age Equivalent Scores on the PLS-3 at Pretest and Posttest #1 (Raw Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

Subscale	n	Mean Raw Score	Actual Age	Age Equivalent	Difference
Auditory					
Pretest	13	23	2,4 to 2,5	2,4	0
	78	24	2,6 to 2,11	2,5	1
	111	27	3,0 to 3,5	2,9	-1
	109	31	3,6 to 3,11	3,1	-5
	192	34	4,0 to 4,5	3,5	-7
	210	37	4,6 to 4,11	3,10	-8
	112	40	5,0 to 5,11	4,3	-9
	23	44	6,0 to 6,11	5,4	-8
Posttest	10	26	2,6 to 2,11	2,7	1
	37	29	3,0 to 3,5	2,11	-1
	61	34	3,6 to 3,11	3,5	-1
	66	36	4,0 to 4,5	3,8	-4
	127	40	4,6 to 4,11	4,3	-3
	224	42	5,0 to 5,11	4,8	-4
	32	44	6,0 to 6,11	5,4	-8
Expressive					
Pretest	13	21	2,4 to 2,5	2,4	0
	79	22	2,6 to 2,11	2,5	-1
	110	25	3,0 to 3,5	2,9	-3
	109	28	3,6 to 3,11	3,1	-5
	190	32	4,0 to 4,5	3,6	-6
	210	36	4,6 to 4,11	3,11	-7
	112	39	5,0 to 5,11	4,4	-8
	23	43	6,0 to 6,11	5,1	-11
Posttest	10	24	2,6 to 2,11	2,8	2
	39	26	3,0 to 3,5	2,10	-2
	61	31	3,6 to 3,11	3,5	-1
	66	34	4,0 to 4,5	3,9	-3
	127	39	4,6 to 4,11	4,4	-2
	225	42	5,0 to 5,11	4,10	-2
	32	43	6,0 to 6,11	5,1	-11

Exhibit reads: For children between the ages of 3 years, 6 months and 3 years, 11 months who were pretested and posttested once on the auditory portion of the Preschool Language Scales, the average pretest score was 31 (raw score), which corresponds to an age equivalent score of 3 years, 1 month, or 5 months, on average, below scores based on chronological age. For those children between 3 years, 6 months and 3 years, 11 months, the average posttest (raw score) was 34, which corresponds to an age equivalent score of 3 years, 5 months, or 1 month, on average, below scores based on chronological age.

Exhibit D.2a, Part 2: Age Equivalent Scores on the PLS-3 at Pretest and Posttest #2 (Raw Scores from the Sample Study, 1994-95, 1995-96, and 1996-97)

Subscale	n	Mean Raw Score	Actual Age	Age Equivalent	Difference
Auditory					
Pretest	2	22	2,4 to 2,5	2,3	-1
	20	23	2,6 to 2,11	2,4	-2
	34	26	3,0 to 3,5	2,7	-3
	34	32	3,6 to 3,11	3,3	-3
	37	34	4,0 to 4,5	3,5	-7
	23	36	4,6 to 4,11	3,8	-10
	31	40	5,0 to 5,11	4,3	-9
	2	42	6,0 to 6,11	4,8	-16
Follow Up	8	34	3,6 to 3,11	3,5	-1
	16	37	4,0 to 4,5	3,10	-2
	40	39	4,6 to 4,11	4,2	-4
	69	41	5,0 to 5,11	4,6	-6
	43	45	6,0 to 6,11	5,8	-4
Expressive					
Pretest	2	17	2,4 to 2,5	1,10	-6
	20	19	2,6 to 2,11	2,1	-5
	34	24	3,0 to 3,5	2,8	-4
	34	30	3,6 to 3,11	3,4	-2
	37	33	4,0 to 4,5	3,7	-5
	23	35	4,6 to 4,11	3,10	-8
	31	42	5,0 to 5,11	4,10	-2
	2	43	6,0 to 6,11	5,1	-11
Follow Up	8	32	3,6 to 3,11	3,6	0
	15	35	4,0 to 4,5	3,10	-2
	40	38	4,6 to 4,11	4,2	-4
	69	40	5,0 to 5,11	4,6	-6
	42	45	6,0 to 6,11	5,11	-1

Exhibit reads: For children between the ages of 3 years, 6 months and 3 years, 11 months who were pretested and posttested twice on the auditory portion of the Preschool Language Scales, the average pretest score was 32 (raw score), which corresponds to an age equivalent score of 3 years, 3 month, or 3 months, on average, below scores based on chronological age. For those children between 3 years, 6 months and 3 years, 11 months who were posttested a second time, the average raw score was 34, which corresponds to an age equivalent score of 3 years, 5 months, or 1 month, on average, below scores based on chronological age.

BEST COPY AVAILABLE

Exhibit D.3: **HOME Screening Questionnaire (HSQ) Pretest Scores for Parents of Children Less than 3 Years of Age (Raw Scores from the Sample Study, 1994-95 and 1995-96)**

Group	n	Mean	S.D.
Highest grade at intake			
Grade 0-4	11	24.5	8.1
Grade 5-8	55	27.5	5.0
Grade 9-12	169	29.0	6.0
HS Diploma or GED	23	33.8	6.2
Primary language is English			
Yes	181	30.0	6.9
No	73	27.7	6.2
Parent gender			
Male	23	30.3	5.7
Female	240	27.1	6.8
Parent race/ethnicity			
African American	90	28.1	5.9
Asian	19	27.7	7.7
Hispanic	89	27.0	5.9
American Indian	2	31.5	2.1
Caucasian	70	31.8	5.9
Total	**322**	**30.1**	**7.2**

Exhibit reads: HSQs were completed on 322 families with children less than 3 years of age at pretest. The average pretest score in 1994-95 or 1995-96 was 30.1 with a standard deviation of 7.2.

Exhibit D.4: **HOME Screening Questionnaire Pretest Scores for Parents of Children 3- to 6-Years-Old (Raw Scores from the Sample Study, 1994-95 and 1995-96)**

Group	n	Mean	S.D.
Highest grade at intake			
Grade 0-4	31	31.6	6.4
Grade 5-8	109	32.3	7.2
Grade 9-12	388	34.3	7.5
HS Diploma or GED	89	36.6	7.0
Primary language is English			
Yes	413	34.6	7.5
No	167	35.5	7.7
Parent gender			
Male	38	37.0	5.8
Female	556	34.7	7.6
Parent race/ethnicity			
African American	188	33.2	7.9
Asian	65	36.8	6.2
Hispanic	229	32.4	6.6
American Indian	27	37.2	7.3
Caucasian	181	38.2	7.4
Total	**764**	**35.1**	**7.6**

Exhibit reads: HSQs were completed on 764 families with children between 3 and 6 years of age at pretest. The average pretest score was 35.1 with a standard deviation of 7.6.

BEST COPY AVAILABLE

Exhibit D.5: CASAS Reading Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96)

Group	n	Mean	S.D.
Highest Grade at Intake			
Grade 0-4	11	185.9	13.0
Grade 5-8	34	214.8	21.2
Grade 9-12	115	229.2	13.7
HS Diploma or GED	70	232.2	18.8
Primary language is English			
Yes	163	233.6	13.7
No	71	207.7	19.9
Gender			
Male	22	219.1	20.6
Female	218	226.4	19.5
Race/Ethnicity			
African American	36	227.9	12.6
Asian	53	225.1	18.4
Hispanic	44	204.6	22.1
American Indian	2	224.0	0
Caucasian	96	234.9	14.2
Total	**246**	**226.1**	**19.6**

Exhibit reads: 115 adults who had completed between 9 and 12 years of schooling completed a reading CASAS pretest; the mean pretest scale score was 229.2, with a standard deviation of 13.7.

Exhibit D.6: CASAS Math Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96)

Group	n	Mean	S.D.
Highest Grade at Intake			
Grade 0-4	5	188.8	12.9
Grade 5-8	27	215.3	13.9
Grade 9-12	106	217.9	13.1
HS Diploma or GED	62	225.6	13.4
Primary language is English			
Yes	158	221.2	13.4
No	45	211.8	16.2
Gender			
Male	17	221.4	15.5
Female	193	219.1	14.4
Race/Ethnicity			
African American	35	216.5	10.6
Asian	48	221.6	14.6
Hispanic	28	209.0	16.3
American Indian	2	216.0	0
Caucasian	89	222.0	14.1
Total	**215**	**219.3**	**14.4**

Exhibit reads: 106 adults who had completed between 9 and 12 years of schooling completed a math CASAS pretest; the mean pretest scale score was 217.9, with a standard deviation of 13.1.

BEST COPY AVAILABLE

Exhibit D.7: TABE Reading Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96)

Group	n	Mean	S.D.
Highest grade at intake			
Grade 0-4	2	573.5	95.4
Grade 5-8	85	724.7	69.4
Grade 9-12	479	718.1	82.1
HS Diploma or GED	54	694.7	96.4
Primary language is English			
Yes	583	718.1	81.5
No	37	693.3	92.8
Parent gender			
Male	28	703.2	85.9
Female	627	716.0	81.7
Parent race/ethnicity			
African American	329	712.1	75.8
Asian	5	750.0	65.2
Hispanic	56	699.7	88.4
American Indian	5	698.2	128.3
Caucasian	219	728.2	88.5
Total	**685**	**716.5**	**81.3**

Exhibit reads: 627 females completed a pretest on the TABE Reading; the mean pretest scale score was 716.0, with a standard deviation of 81.7.

Exhibit D.8: TABE Math Pretest Scores (Scaled Scores from the Sample Study, 1994-95 and 1995-96)

Group	n	Mean	S.D.
Highest grade at intake			
Grade 0-4	2	583.5	92.6
Grade 5-8	84	710.7	83.2
Grade 9-12	455	720.5	83.1
HS Diploma or GED	54	701.8	110.2
Primary language is English			
Yes	562	717.5	85.9
No	33	711.6	91.8
Parent gender			
Male	27	694.3	99.4
Female	603	717.2	85.5
Parent race/ethnicity			
African American	317	716.9	82.9
Asian	4	765.0	19.6
Hispanic	53	709.5	96.7
American Indian	5	701.8	124.2
Caucasian	210	718.8	89.1
Total	**661**	**716.9**	**85.8**

Exhibit reads: 455 adults who had completed between 9 and 12 years of schooling completed a TABE math pretest; the mean pretest scale score was 720.5, with a standard deviation of 83.1.

Exhibit D.9: Correlations of Predictors and Gains on Adult Outcomes

Predictors	CASAS Reading (n=137)	CASAS Math (n=115)	TABE Reading (n=277)	TABE Math (n=257)
Pretest score	-.43*	-.23*	-.43*	-.35*
Hours of adult education received pre to post	.02	.03	-.02	.15*
# Adult education instructors at site	.08	.27*	.12*	-.01
Hours of adult education offered/month	-.11	-.06	-.04	.08
% Adult education instructors with BA+	.16	.38*	.05	.11
% Adult education instructors with 5+ years experience	-.05	-.02	-.09	-.05
Proportion of home-based adult education offered	.05	.09	.03	.01
Even Start money	-.02	.07	-.07	.02
Total money	-.09	-.04	-.12*	.06
Even Start money per family	-.10	.07	-.06	-.08
Total money per family	-.15	-.03	-.04	-.03
# Families served	.01	.01	-.10	.01
Family need index	.10	-.08	.05	.10
Project age	.03	-.21*	-.07	-.09
Family participation in all core instructional services (a)	-.14	.36*	.05	-.10
Transportation services received by family	-.09	.07	.06	.07
Child care services received by family	.21*	.03	.15*	.03

* $p < .05$

(a) The n for this correlation is 24.

Note: Any variable that was significantly correlated in simple correlations is not necessarily significant when entered into a multiple regression model; for example, the CASAS math pretest is significantly correlated with the math gain score but is no longer significant in a multiple regression model. Consequently, not all of the possible predictor variables significantly correlated with other individual variables are included in subsequent models.

(Exhibit D.9 continues on following page.)

Exhibit D.9: Correlations of Predictors and Gains on Adult Outcomes (Continued)

	Outcome Measures	
Predictors	**HSQ 0-3 (n=138)**	**HSQ 3-6 (n=384)**
Pretest score	-.57*	.45*
Hrs parent education received pre to post	.31 (b)	-.08 (c)
# Parent education instructors at site	.07	-.04
% Instructors with BA+	-.05	-.08
% Instructors with 5+ years experience	.15	-.03
Hours of parent education offered/month	-.04	.01
Proportion of homebased parent education hours offered	.11	.03
Even Start money	-.14	-.07
Total money	-.11	-.04
Even Start money per family	.01	-.12*
Total money per family	.02	-.07
# Families served	-.04	.07
PACT time	.12	.07
Family need index	.18*	.03
Project age	-.09	-.09
Family participation in all core services (d)	.35*	.04
Transportation services received (e)	.56	.01
Child care services received (e)	.47	.11
Child care services available	-.11	-.01

* $p < .05$

(b) n=12; (c) n=79; (d) n=52; (e) n=11

INDEX

A

Adult education and adult literacy 7
Adult education outcomes 150
Adult Sample Study participation 159
Analytic techniques 135
Annual budget 63

B

Barriers to program implementation 71

C

CASAS math growth for the ESIS evaluation sample 171
CASAS performance 151
CASAS reading growth for different Even Start samples 170
Center-based services 84
Child cognitive development vi
Collaborating agencies 68
Community-based organization (CBO) 61
Completion rates 122
Comprehensive Adult Student Assessment System (CASAS) 150
Core educational services 7
Cost 62

D

Demographic characteristics 29, 31

E

Early childhood education 7
Educational backgrounds xii, 41
Eligibility requirements 77
Employment xii
Employment status 162
English proficiency 47
Ethnicity 44
Even Start Conceptual Model 9
Even Start Information System (ESIS) 16
Even Start legislation 1
Extended families 35

F

Family characteristics xi
Family structure 35
Federal Even Start grants 61
First Even Start national evaluation 15
Flexibility of services 100
Functional literacy 90
Funding xiv

G

GED certificate 161
Glue (Even Start as) 68
Government assistance 37
Growth models 135

H

Head Start 49
Hispanics 45
Home Screening Questionnaire (HSQ) 147
Home visits 103
Home-based projects 86
Home-based services 84
Hours of participation in adult education 108
Hours of participation in parenting education 111
Hours offered 81, 117
HSQ gains 149
HSQ performance 148

I

Income 36
In-Depth Study (IDS) 15
Indian tribes and tribal organizations 3
Indicators of family need 51
Infants and toddlers 34
Inservice training 66
Integration of instructional activities 95
Integration of services 119
Interagency collaboration xvi

K

Key elements 6

L

Local 62
Local educational agency (LEA) 61

M

Migrant Education Even Start (MEES) 3
Most in need (definition) 50

N

National Evaluation Information System (NEIS) 15
Need index 52
Number of participating families 4
Number of projects 4

O

Outcome measures ... 21
Outcomes of Even Start ... vi

P

Parent-child joint activities ... 93
Parenting education ... 7, 92
Parenting outcomes ... 146
Participation in adult and parenting education ... 104
Participation in all core services ... 115
Participation in early childhood education ... 112
Participation rates ... xx, 101, 126
Partnership ... 61
Per-family cost ... 63
PLS findings ... 142
PLS-3 growth for the ESIS evaluation sample ... 169
PPVT growth for different Even Start evaluation samples ... 168
PreSchool Inventory (PSI) ... 132
Preschool Language Scales (PLS-3) ... 133
Program completion ... 121
Progress indicators ... 163
Project age ... 62
PSI growth for different Even Start evaluation samples ... 166
PSI results ... 140

R

Race/ethnicity ... xiii
Racial/ethnic composition ... 44
Rate of GED attainment for different Even Start evaluation samples ... 173
Reasons for participation ... 56
Retention ... xxi, 119, 123
Rural areas ... 60

S

Sample Study ... 20, 25, 129
Screening criteria ... 77
Second Even Start national evaluation ... 16
Second national evaluation ... 23
Service intensity ... 81, 117
Set-aside funds ... 3
Single parents ... 35
Source of income ... 37
Special needs ... 49
Staff ... xv
Staffing patterns ... 65
State-administered projects ... 2
Support services ... xx, 97, 99, 118

T

TABE performance ... 155
TABE reading and math growth for the ESIS evaluation samples ... 172
Technical assistance ... 73
Teen parents ... 2, 32
Tests of Adult Basic Education (TABE) ... 154
Transitional services ... 96
Two-parent families ... 35

U

Universe Study ... 23
Urban areas ... 60

V

Variation in the educational service hours ... 85
Very needy families ... xxii, 124
Volunteers ... 65

W

Welfare reform ... 29, 91

☆ U. S. GOVERNMENT PRINTING OFFICE: 1999-718-069/93636